

## 379 Human Secreted Proteins

### *Related Applications*

This application is a continuation-in-part of PCT/US02/09188, filed March 26, 2002,  
5 which in turn claims benefit of the following:

Application ::	Continuity Type::	Parent Application::	Parent Filing Date::
PCT/US02/09188	Continuation-in-part of	10/105,299	03/26/02
10/105,299	Non-provisional of	US 60/278,650	03/27/01
10/105,299	Continuation-in-part of	US 09/950,082	09/12/01
US 09/950,082	Non-provisional of	US 60/278,650	03/27/01
US 09/950,082	Continuation-in-part of	PCT/US00/06043	03/09/00
US00/06043	Non-provisional of	US 60/167,061	11/23/99
US00/06043	Non-provisional of	US 60/124,146	03/12/99
US 09/950,082	Continuation-in-part of	PCT/US00/06012	03/09/00
US00/06012	Non-provisional of	US 60/166,989	11/23/99
US00/06012	Non-provisional of	US 60/124,093	03/12/99
US 09/950,082	Continuation-in-part of	PCT/US00/06058	03/09/00
US00/06058	Non-provisional of	US 60/168,654	12/03/99
US00/06058	Non-provisional of	US 60/124,145	03/12/99
US 09/950,082	Continuation-in-part of	PCT/US00/06044	03/09/00
US00/06044	Non-provisional of	US 60/168,661	12/03/99
US00/06044	Non-provisional of	US 60/124,099	03/12/99
US 09/950,082	Continuation-in-part of	PCT/US00/06059	03/09/00
US00/06059	Non-provisional of	US 60/168,622	12/03/99
US00/06059	Non-provisional of	US 60/124,096	03/12/99
US 09/950,082	Continuation-in-part of	PCT/US00/06042	03/09/00
US00/06042	Non-provisional of	US 60/168,663	12/03/99
US00/06042	Non-provisional of	US 60/124,143	03/12/99
US 09/950,082	Continuation-in-part of	PCT/US00/06014	03/09/00
US00/06014	Non-provisional of	US 60/168,665	12/03/99
US00/06014	Non-provisional of	US 60/138,598	06/11/99
US00/06014	Non-provisional of	US 60/124,095	03/12/99
US 09/950,082	Continuation-in-part of	PCT/US00/06013	03/09/00
US00/06013	Non-provisional of	US 60/168,662	12/03/99
US00/06013	Non-provisional of	US 60/138,626	06/11/99
US00/06013	Non-provisional of	US 60/125,360	03/19/99
US 09/950,082	Continuation-in-part of	PCT/US00/06049	03/09/00
US00/06049	Non-provisional of	US 60/168,667	12/03/99
US00/06049	Non-provisional of	US 60/138,574	06/11/99
US00/06049	Non-provisional of	US 60/124,144	03/12/99
US 09/950,082	Continuation-in-part of	PCT/US00/06057	03/09/00
US00/06057	Non-provisional of	US 60/168,666	12/03/99
US00/06057	Non-provisional of	US 60/138,597	06/11/99
US00/06057	Non-provisional of	US 60/124,142	03/12/99
US 09/950,082	Continuation-in-part of	PCT/US00/06824	03/16/00
US00/06824	Non-provisional of	US 60/168,664	12/03/99
US00/06824	Non-provisional of	US 60/125,359	03/19/99
US 09/950,082	Continuation-in-part of	PCT/US00/06765	03/16/00

US00/06765	Non-provisional of	US 60/169,906	12/10/99
US00/06765	Non-provisional of	US 60/126,051	03/23/99
US 09/950,082	Continuation-in-part of	PCT/US00/06792	03/16/00
US00/06792	Non-provisional of	US 60/169,980	12/10/99
US00/06792	Non-provisional of	US 60/125,362	03/19/99
US 09/950,082	Continuation-in-part of	PCT/US00/06830	03/16/00
US00/06830	Non-provisional of	US 60/169,910	12/10/99
US00/06830	Non-provisional of	US 60/125,361	03/19/99
US 09/950,082	Continuation-in-part of	PCT/US00/06782	03/16/00
US00/06782	Non-provisional of	US 60/169,936	12/10/99
US00/06782	Non-provisional of	US 60/125,812	03/23/99
US 09/950,082	Continuation-in-part of	PCT/US00/06822	03/16/00
US00/06822	Non-provisional of	US 60/169,916	12/10/99
US00/06822	Non-provisional of	US 60/126,054	03/23/99
US 09/950,082	Continuation-in-part of	PCT/US00/06791	03/16/00
US00/06791	Non-provisional of	US 60/169,946	12/10/99
US00/06791	Non-provisional of	US 60/125,815	03/23/99
US 09/950,082	Continuation-in-part of	PCT/US00/06828	03/16/00
US00/06828	Non-provisional of	US 60/169,616	12/08/99
US00/06828	Non-provisional of	US 60/125,358	03/19/99
US 09/950,082	Continuation-in-part of	PCT/US00/06823	03/16/00
US00/06823	Non-provisional of	US 60/169,623	12/08/99
US00/06823	Non-provisional of	US 60/125,364	03/19/99
US 09/950,082	Continuation-in-part of	PCT/US00/06781	03/16/00
US00/06781	Non-provisional of	US 60/169,617	12/08/99
US00/06781	Non-provisional of	US 60/125,363	03/19/99
US 09/950,082	Continuation-in-part of	PCT/US00/07505	03/22/00
US00/07505	Non-provisional of	US 60/172,410	12/17/99
US00/07505	Non-provisional of	US 60/126,502	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07440	03/22/00
US00/07440	Non-provisional of	US 60/172,409	12/17/99
US00/07440	Non-provisional of	US 60/126,503	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07506	03/22/00
US00/07506	Non-provisional of	US 60/172,412	12/17/99
US00/07506	Non-provisional of	US 60/126,505	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07507	03/22/00
US00/07507	Non-provisional of	US 60/172,408	12/17/99
US00/07507	Non-provisional of	US 60/126,594	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07535	03/22/00
US00/07535	Non-provisional of	US 60/172,413	12/17/99
US00/07535	Non-provisional of	US 60/126,511	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07525	03/22/00
US00/07525	Non-provisional of	US 60/171,549	12/22/99
US00/07525	Non-provisional of	US 60/126,595	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07534	03/22/00
US00/07534	Non-provisional of	US 60/171,504	12/22/99
US00/07534	Non-provisional of	US 60/126,598	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07483	03/22/00
US00/07483	Non-provisional of	US 60/171,552	12/22/99
US00/07483	Non-provisional of	US 60/126,596	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07526	03/22/00
US00/07526	Non-provisional of	US 60/171,550	12/22/99

US00/07526	Non-provisional of	US 60/126,600	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07527	03/22/00
US00/07527	Non-provisional of	US 60/171,551	12/22/99
US00/07527	Non-provisional of	US 60/126,501	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07661	03/23/00
US00/07661	Non-provisional of	US 60/174,847	01/07/00
US00/07661	Non-provisional of	US 60/126,504	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07579	03/23/00
US00/07579	Non-provisional of	US 60/174,853	01/07/00
US00/07579	Non-provisional of	US 60/126,509	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07723	03/23/00
US00/07723	Non-provisional of	US 60/242,710	10/25/00
US00/07723	Non-provisional of	US 60/174,852	01/07/00
US00/07723	Non-provisional of	US 60/126,506	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07724	03/23/00
US00/07724	Non-provisional of	US 60/174,850	01/07/00
US00/07724	Non-provisional of	US 60/126,510	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/14929	06/01/00
US00/14929	Non-provisional of	US 60/174,851	01/07/00
US00/14929	Non-provisional of	US 60/138,573	06/11/99
US 09/950,082	Continuation-in-part of	PCT/US00/07722	03/23/00
US00/07722	Non-provisional of	US 60/174,871	01/07/00
US00/07722	Non-provisional of	US 60/126,508	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07578	03/23/00
US00/07578	Non-provisional of	US 60/174,872	01/07/00
US00/07578	Non-provisional of	US 60/126,507	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07726	03/23/00
US00/07726	Non-provisional of	US 60/174,877	01/07/00
US00/07726	Non-provisional of	US 60/126,597	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07677	03/23/00
US00/07677	Non-provisional of	US 60/176,064	01/14/00
US00/07677	Non-provisional of	US 60/154,373	09/17/99
US00/07677	Non-provisional of	US 60/126,601	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/07725	03/23/00
US00/07725	Non-provisional of	US 60/176,063	01/14/00
US00/07725	Non-provisional of	US 60/126,602	03/26/99
US 09/950,082	Continuation-in-part of	PCT/US00/09070	04/06/00
US00/09070	Non-provisional of	US 60/176,052	01/14/00
US00/09070	Non-provisional of	US 60/128,695	04/09/99
US 09/950,082	Continuation-in-part of	PCT/US00/08982	04/06/00
US00/08982	Non-provisional of	US 60/176,069	01/14/00
US00/08982	Non-provisional of	US 60/128,696	04/09/99
US 09/950,082	Continuation-in-part of	PCT/US00/08983	04/06/00
US00/08983	Non-provisional of	US 60/176,068	01/14/00
US00/08983	Non-provisional of	US 60/128,703	04/09/99
US 09/950,082	Continuation-in-part of	PCT/US00/09067	04/06/00
US00/09067	Non-provisional of	US 60/176,929	01/20/00
US00/09067	Non-provisional of	US 60/128,697	04/09/99
US 09/950,082	Continuation-in-part of	PCT/US00/09066	04/06/00
US00/09066	Non-provisional of	US 60/176,926	01/20/00
US00/09066	Non-provisional of	US 60/128,698	04/09/99
US 09/950,082	Continuation-in-part of	PCT/US00/09068	04/06/00

US00/09068	Non-provisional of	US 60/177,050	01/20/00
US00/09068	Non-provisional of	US 60/128,699	04/09/99
US 09/950,082	Continuation-in-part of	PCT/US00/08981	04/06/00
US00/08981	Non-provisional of	US 60/177,166	01/20/00
US00/08981	Non-provisional of	US 60/128,701	04/09/99
US 09/950,082	Continuation-in-part of	PCT/US00/08980	04/06/00
US00/08980	Non-provisional of	US 60/176,930	01/20/00
US00/08980	Non-provisional of	US 60/128,700	04/09/99
US 09/950,082	Continuation-in-part of	PCT/US00/09071	04/06/00
US00/09071	Non-provisional of	US 60/176,931	01/20/00
US00/09071	Non-provisional of	US 60/128,694	04/09/99
US 09/950,082	Continuation-in-part of	PCT/US00/09069	04/06/00
US00/09069	Non-provisional of	US 60/177,049	01/20/00
US00/09069	Non-provisional of	US 60/128,702	04/09/99
US 09/950,082	Continuation-in-part of	PCT/US00/15136	06/01/00
US00/15136	Non-provisional of	US 60/138,629	06/11/99
US 09/950,082	Continuation-in-part of	PCT/US00/14926	06/01/00
US00/14926	Non-provisional of	US 60/138,628	06/11/99
US 09/950,082	Continuation-in-part of	PCT/US00/14963	06/01/00
US00/14963	Non-provisional of	US 60/138,631	06/11/99
US 09/950,082	Continuation-in-part of	PCT/US00/15135	06/01/00
US00/15135	Non-provisional of	US 60/138,632	06/11/99
US 09/950,082	Continuation-in-part of	PCT/US00/14934	06/01/00
US00/14934	Non-provisional of	US 60/138,599	06/11/99
US 09/950,082	Continuation-in-part of	PCT/US00/14933	06/01/00
US00/14933	Non-provisional of	US 60/138,572	06/11/99
US 09/950,082	Continuation-in-part of	PCT/US00/15137	06/01/00
US00/15137	Non-provisional of	US 60/138,625	06/11/99
US 09/950,082	Continuation-in-part of	PCT/US00/14928	06/01/00
US00/14928	Non-provisional of	US 60/138,633	06/11/99
US 09/950,082	Continuation-in-part of	PCT/US00/14973	06/01/00
US00/14973	Non-provisional of	US 60/138,630	06/11/99
US 09/950,082	Continuation-in-part of	PCT/US00/14964	06/01/00
US00/14964	Non-provisional of	US 60/138,627	06/11/99
US 09/950,082	Continuation-in-part of	PCT/US00/26376	09/26/00
US00/26376	Non-provisional of	US 60/155,808	09/27/99
US 09/950,082	Continuation-in-part of	PCT/US00/26371	09/26/00
US00/26371	Non-provisional of	US 60/155,804	09/27/99
US 09/950,082	Continuation-in-part of	PCT/US00/26324	09/26/00
US00/26324	Non-provisional of	US 60/155,807	09/27/99
US 09/950,082	Continuation-in-part of	PCT/US00/26323	09/26/00
US00/26323	Non-provisional of	US 60/155,805	09/27/99
US 09/950,082	Continuation-in-part of	PCT/US00/26337	09/26/00
US00/26337	Non-provisional of	US 60/155,806	09/27/99
US 09/950,082	Continuation-in-part of	US01/13318	04/27/01
US01/13318	Non-provisional of	US 60/212,142	06/16/00
US01/13318	Non-provisional of	US 60/201,194	05/02/00
10/105,299	Continuation-in-part of	US 09/950,083	09/12/01
US 09/950,083	Non-provisional of	US 60/278,650	03/27/01
US 09/950,083	Continuation-in-part of	PCT/US00/06043	03/09/00
US00/06043	Non-provisional of	US 60/167,061	11/23/99
US00/06043	Non-provisional of	US 60/124,146	03/12/99



US 09/950,083	Continuation-in-part of	PCT/US00/06012	03/09/00
US00/06012	Non-provisional of	US 60/166,989	11/23/99
US00/06012	Non-provisional of	US 60/124,093	03/12/99
US 09/950,083	Continuation-in-part of	PCT/US00/06058	03/09/00
US00/06058	Non-provisional of	US 60/168,654	12/03/99
US00/06058	Non-provisional of	US 60/124,145	03/12/99
US 09/950,083	Continuation-in-part of	PCT/US00/06044	03/09/00
US00/06044	Non-provisional of	US 60/168,661	12/03/99
US00/06044	Non-provisional of	US 60/124,099	03/12/99
US 09/950,083	Continuation-in-part of	PCT/US00/06059	03/09/00
US00/06059	Non-provisional of	US 60/168,622	12/03/99
US00/06059	Non-provisional of	US 60/124,096	03/12/99
US 09/950,083	Continuation-in-part of	PCT/US00/06042	03/09/00
US00/06042	Non-provisional of	US 60/168,663	12/03/99
US00/06042	Non-provisional of	US 60/124,143	03/12/99
US 09/950,083	Continuation-in-part of	PCT/US00/06014	03/09/00
US00/06014	Non-provisional of	US 60/168,665	12/03/99
US00/06014	Non-provisional of	US 60/138,598	06/11/99
US00/06014	Non-provisional of	US 60/124,095	03/12/99
US 09/950,083	Continuation-in-part of	PCT/US00/06013	03/09/00
US00/06013	Non-provisional of	US 60/168,662	12/03/99
US00/06013	Non-provisional of	US 60/138,626	06/11/99
US00/06013	Non-provisional of	US 60/125,360	03/19/99
US 09/950,083	Continuation-in-part of	PCT/US00/06049	03/09/00
US00/06049	Non-provisional of	US 60/168,667	12/03/99
US00/06049	Non-provisional of	US 60/138,574	06/11/99
US00/06049	Non-provisional of	US 60/124,144	03/12/99
US 09/950,083	Continuation-in-part of	PCT/US00/06057	03/09/00
US00/06057	Non-provisional of	US 60/168,666	12/03/99
US00/06057	Non-provisional of	US 60/138,597	06/11/99
US00/06057	Non-provisional of	US 60/124,142	03/12/99
US 09/950,083	Continuation-in-part of	PCT/US00/06824	03/16/00
US00/06824	Non-provisional of	US 60/168,664	12/03/99
US00/06824	Non-provisional of	US 60/125,359	03/19/99
US 09/950,083	Continuation-in-part of	PCT/US00/06765	03/16/00
US00/06765	Non-provisional of	US 60/169,906	12/10/99
US00/06765	Non-provisional of	US 60/126,051	03/23/99
US 09/950,083	Continuation-in-part of	PCT/US00/06792	03/16/00
US00/06792	Non-provisional of	US 60/169,980	12/10/99
US00/06792	Non-provisional of	US 60/125,362	03/19/99
US 09/950,083	Continuation-in-part of	PCT/US00/06830	03/16/00
US00/06830	Non-provisional of	US 60/169,910	12/10/99
US00/06830	Non-provisional of	US 60/125,361	03/19/99
US 09/950,083	Continuation-in-part of	PCT/US00/06782	03/16/00
US00/06782	Non-provisional of	US 60/169,936	12/10/99
US00/06782	Non-provisional of	US 60/125,812	03/23/99
US 09/950,083	Continuation-in-part of	PCT/US00/06822	03/16/00
US00/06822	Non-provisional of	US 60/169,916	12/10/99
US00/06822	Non-provisional of	US 60/126,054	03/23/99
US 09/950,083	Continuation-in-part of	PCT/US00/06791	03/16/00
US00/06791	Non-provisional of	US 60/169,946	12/10/99
US00/06791	Non-provisional of	US 60/125,815	03/23/99

US 09/950,083	Continuation-in-part of	PCT/US00/06828	03/16/00
US00/06828	Non-provisional of	US 60/169,616	12/08/99
US00/06828	Non-provisional of	US 60/125,358	03/19/99
US 09/950,083	Continuation-in-part of	PCT/US00/06823	03/16/00
US00/06823	Non-provisional of	US 60/169,623	12/08/99
US00/06823	Non-provisional of	US 60/125,364	03/19/99
US 09/950,083	Continuation-in-part of	PCT/US00/06781	03/16/00
US00/06781	Non-provisional of	US 60/169,617	12/08/99
US00/06781	Non-provisional of	US 60/125,363	03/19/99
US 09/950,083	Continuation-in-part of	PCT/US00/07505	03/22/00
US00/07505	Non-provisional of	US 60/172,410	12/17/99
US00/07505	Non-provisional of	US 60/126,502	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07440	03/22/00
US00/07440	Non-provisional of	US 60/172,409	12/17/99
US00/07440	Non-provisional of	US 60/126,503	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07506	03/22/00
US00/07506	Non-provisional of	US 60/172,412	12/17/99
US00/07506	Non-provisional of	US 60/126,505	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07507	03/22/00
US00/07507	Non-provisional of	US 60/172,408	12/17/99
US00/07507	Non-provisional of	US 60/126,594	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07535	03/22/00
US00/07535	Non-provisional of	US 60/172,413	12/17/99
US00/07535	Non-provisional of	US 60/126,511	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07525	03/22/00
US00/07525	Non-provisional of	US 60/171,549	12/22/99
US00/07525	Non-provisional of	US 60/126,595	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07534	03/22/00
US00/07534	Non-provisional of	US 60/171,504	12/22/99
US00/07534	Non-provisional of	US 60/126,598	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07483	03/22/00
US00/07483	Non-provisional of	US 60/171,552	12/22/99
US00/07483	Non-provisional of	US 60/126,596	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07526	03/22/00
US00/07526	Non-provisional of	US 60/171,550	12/22/99
US00/07526	Non-provisional of	US 60/126,600	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07527	03/22/00
US00/07527	Non-provisional of	US 60/171,551	12/22/99
US00/07527	Non-provisional of	US 60/126,501	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07661	03/23/00
US00/07661	Non-provisional of	US 60/174,847	01/07/00
US00/07661	Non-provisional of	US 60/126,504	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07579	03/23/00
US00/07579	Non-provisional of	US 60/174,853	01/07/00
US00/07579	Non-provisional of	US 60/126,509	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07723	03/23/00
US00/07723	Non-provisional of	US 60/242,710	10/25/00
US00/07723	Non-provisional of	US 60/174,852	01/07/00
US00/07723	Non-provisional of	US 60/126,506	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07724	03/23/00
US00/07724	Non-provisional of	US 60/174,850	01/07/00
US00/07724	Non-provisional of	US 60/126,510	03/26/99

US 09/950,083	Continuation-in-part of	PCT/US00/14929	06/01/00
US00/14929	Non-provisional of	US 60/174,851	01/07/00
US00/14929	Non-provisional of	US 60/138,573	06/11/99
US 09/950,083	Continuation-in-part of	PCT/US00/07722	03/23/00
US00/07722	Non-provisional of	US 60/174,871	01/07/00
US00/07722	Non-provisional of	US 60/126,508	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07578	03/23/00
US00/07578	Non-provisional of	US 60/174,872	01/07/00
US00/07578	Non-provisional of	US 60/126,507	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07726	03/23/00
US00/07726	Non-provisional of	US 60/174,877	01/07/00
US00/07726	Non-provisional of	US 60/126,597	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07677	03/23/00
US00/07677	Non-provisional of	US 60/176,064	01/14/00
US00/07677	Non-provisional of	US 60/154,373	09/17/99
US00/07677	Non-provisional of	US 60/126,601	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/07725	03/23/00
US00/07725	Non-provisional of	US 60/176,063	01/14/00
US00/07725	Non-provisional of	US 60/126,602	03/26/99
US 09/950,083	Continuation-in-part of	PCT/US00/09070	04/06/00
US00/09070	Non-provisional of	US 60/176,052	01/14/00
US00/09070	Non-provisional of	US 60/128,695	04/09/99
US 09/950,083	Continuation-in-part of	PCT/US00/08982	04/06/00
US00/08982	Non-provisional of	US 60/176,069	01/14/00
US00/08982	Non-provisional of	US 60/128,696	04/09/99
US 09/950,083	Continuation-in-part of	PCT/US00/08983	04/06/00
US00/08983	Non-provisional of	US 60/176,068	01/14/00
US00/08983	Non-provisional of	US 60/128,703	04/09/99
US 09/950,083	Continuation-in-part of	PCT/US00/09067	04/06/00
US00/09067	Non-provisional of	US 60/176,929	01/20/00
US00/09067	Non-provisional of	US 60/128,697	04/09/99
US 09/950,083	Continuation-in-part of	PCT/US00/09066	04/06/00
US00/09066	Non-provisional of	US 60/176,926	01/20/00
US00/09066	Non-provisional of	US 60/128,698	04/09/99
US 09/950,083	Continuation-in-part of	PCT/US00/09068	04/06/00
US00/09068	Non-provisional of	US 60/177,050	01/20/00
US00/09068	Non-provisional of	US 60/128,699	04/09/99
US 09/950,083	Continuation-in-part of	PCT/US00/08981	04/06/00
US00/08981	Non-provisional of	US 60/177,166	01/20/00
US00/08981	Non-provisional of	US 60/128,701	04/09/99
US 09/950,083	Continuation-in-part of	PCT/US00/08980	04/06/00
US00/08980	Non-provisional of	US 60/176,930	01/20/00
US00/08980	Non-provisional of	US 60/128,700	04/09/99
US 09/950,083	Continuation-in-part of	PCT/US00/09071	04/06/00
US00/09071	Non-provisional of	US 60/176,931	01/20/00
US00/09071	Non-provisional of	US 60/128,694	04/09/99
US 09/950,083	Continuation-in-part of	PCT/US00/09069	04/06/00
US00/09069	Non-provisional of	US 60/177,049	01/20/00
US00/09069	Non-provisional of	US 60/128,702	04/09/99
US 09/950,083	Continuation-in-part of	PCT/US00/15136	06/01/00
US00/15136	Non-provisional of	US 60/138,629	06/11/99
US 09/950,083	Continuation-in-part of	PCT/US00/14926	06/01/00

US00/14926	Non-provisional of	US 60/138,628	06/11/99
US 09/950,083	Continuation-in-part of	PCT/US00/14963	06/01/00
US00/14963	Non-provisional of	US 60/138,631	06/11/99
US 09/950,083	Continuation-in-part of	PCT/US00/15135	06/01/00
US00/15135	Non-provisional of	US 60/138,632	06/11/99
US 09/950,083	Continuation-in-part of	PCT/US00/14934	06/01/00
US00/14934	Non-provisional of	US 60/138,599	06/11/99
US 09/950,083	Continuation-in-part of	PCT/US00/14933	06/01/00
US00/14933	Non-provisional of	US 60/138,572	06/11/99
US 09/950,083	Continuation-in-part of	PCT/US00/15137	06/01/00
US00/15137	Non-provisional of	US 60/138,625	06/11/99
US 09/950,083	Continuation-in-part of	PCT/US00/14928	06/01/00
US00/14928	Non-provisional of	US 60/138,633	06/11/99
US 09/950,083	Continuation-in-part of	PCT/US00/14973	06/01/00
US00/14973	Non-provisional of	US 60/138,630	06/11/99
US 09/950,083	Continuation-in-part of	PCT/US00/14964	06/01/00
US00/14964	Non-provisional of	US 60/138,627	06/11/99
US 09/950,083	Continuation-in-part of	PCT/US00/26376	09/26/00
US00/26376	Non-provisional of	US 60/155,808	09/27/99
US 09/950,083	Continuation-in-part of	PCT/US00/26371	09/26/00
US00/26371	Non-provisional of	US 60/155,804	09/27/99
US 09/950,083	Continuation-in-part of	PCT/US00/26324	09/26/00
US00/26324	Non-provisional of	US 60/155,807	09/27/99
US 09/950,083	Continuation-in-part of	PCT/US00/26323	09/26/00
US00/26323	Non-provisional of	US 60/155,805	09/27/99
US 09/950,083	Continuation-in-part of	PCT/US00/26337	09/26/00
US00/26337	Non-provisional of	US 60/155,806	09/27/99
US 09/950,083	Continuation-in-part of	US01/13318	04/27/01
US01/13318	Non-provisional of	US 60/212,142	06/16/00
US01/13318	Non-provisional of	US 60/201,194	05/02/00

; wherein each of the above applications are all herein incorporated by reference in their entirety.

5

### ***Field of the Invention***

The present invention relates to human secreted proteins/polypeptides, and isolated nucleic acid molecules encoding said proteins/polypeptides, useful for detecting, preventing, diagnosing, prognosticating, treating, and/or ameliorating immune disorders and diseases. Antibodies that bind these polypeptides are also encompassed by the present invention. Also encompassed by the invention are vectors, host cells, and recombinant and synthetic methods for producing said polynucleotides, polypeptides, and/or antibodies. The invention further encompasses screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further encompasses methods and compositions for inhibiting or enhancing the production and function of the polypeptides of the present invention.

15

### ***Background of the Invention***

The immune system is an intricate network of cells, tissues and soluble molecules that function to protect the body from invasion by foreign substances and pathogens. The major cells of the immune system are lymphocytes, including B cells and T cells, and myeloid cells, including basophils, eosinophils, neutrophils, mast cells, monocytes, macrophages and dendritic cells. In addition to these cellular components of the immune system, soluble molecules- such as antibodies, complement proteins, and cytokines- circulate in lymph and blood plasma, and play important roles in immunity.

The immune system can be subdivided into the acquired and innate immune systems. The cells of the innate immune system (e.g., neutrophils, eosinophils, basophils, mast cells) are not antigen specific and their action is not enhanced by repeated exposure to the same antigen. The cells of the acquired immune system (B and T cells) are antigen specific. Repeated exposure of B and T cells to an antigen results in improved immune responses (memory responses) produced by these cell types. The cells and products of the acquired immune system can recruit components of the innate system to mount a focused immune response. For a more extensive review of the immune system, see Fundamental Immunology, 4th edition, Ed. William Paul, Lippincott-Raven Pub. (1998).

An immune response is seldom carried out by a single cell type, but rather requires the coordinated efforts of several cell types. In order to coordinate an immune response, it is necessary that cells of the immune system communicate with each other and with other cells of the body. Communication between cells may be made by cell-cell contact, between membrane bound molecules on each cell, or by the interaction of soluble components of the immune system with cellular receptors. Signaling between cell types may have one or more of a variety of consequences, including activation, proliferation, differentiation, and apoptosis. Activation and differentiation of immune cells may result in the expression or secretion of polypeptides, or other molecules, which in turn affect the function of other cells and/or molecules of the immune system.

Molecules which stimulate or suppress immune system function are known as immunomodulators. These molecules, which include endogenous proteins (e.g., cytokines, cytokine receptors, and intracellular signal transduction molecules), molecules derived from microorganisms, and synthetic agents, may exert their modulatory effects at one or more stages of the immune response, such as antigen recognition, stimulation of cytokine production and release, and/or activation/differentiation of lymphocytes and myeloid cells. Immunomodulators may enhance (immunoprophylaxis, immunostimulation), restore (immunosubstitution, immunorestitution) or suppress (immunosuppression, immunodeviation) immunological functions or activities.

Immunomodulatory compounds have many important applications in clinical practice. For example, immunosuppressing agents (which attenuate or prevent unwanted immune

responses) can be used to prevent tissue rejection during organ transplantation, to prevent Rh hemolytic disease of the newborn, or to treat autoimmune disorders. A mechanism of action common to many immunosuppressants is the inhibition of T cell activation and/or differentiation. Antilymphocyte antibodies have also been used to attenuate immune system functions. Currently-  
5 used immunosuppressive agents can produce a number of side effects which limit their use. Among the most serious secondary effects include kidney and liver toxicity, increased risk of infection, hyperglycemia, neoplasia, and osteoporosis (see, e.g., Freeman, Clin. Biochem. 24(1):9-14 (1991); Mitchison, Dig. Dis. 11(2):78-101 (1993)).

Immunostimulants, which enhance the activity of immune cells and molecules,  
10 comprise another class of immunomodulatory agents with important clinical applications. Such applications include, for example, the treatment of immunodeficiency disorders (e.g. AIDS and severe combined immunodeficiency), chronic infectious diseases (e.g. viral hepatitis, papillomavirus, and herpesvirus), and cancer. An important class of endogenous immunostimulants is the cytokines. These soluble signaling molecules are produced by a number  
15 of cell types, and are critical to the regulation of the immune response. Immunostimulatory mechanisms can include proliferation, differentiation and/or activation of immune cells or progenitors of immune cells. For example, interleukin-2 (IL-2) binds to IL-2 receptors on T lymphocytes and induces proliferation and differentiation. Another cytokine, interferon alpha, stimulates the immune system through a variety of mechanisms, including activation of  
20 macrophages, T lymphocytes, and natural killer cells. Interferon alpha also induces the expression of antiviral proteins (see Chapter 50, The Pharmacological Basis of Therapeutics, 9<sup>th</sup> Edition, Eds. Hardman, Limbird, Molinoff, Ruddon, and Gilman, McGraw Hill (1996)). Limitations of current immunostimulant therapies include anaphylaxis, pulmonary edema, and renal toxicity, to name a few.

25 The discovery of new human immune related polynucleotides, the polypeptides encoded by them, and antibodies that immunospecifically bind these polypeptides, satisfies a need in the art by providing new compositions which are useful in the diagnosis, treatment, prevention and/or prognosis of disorders of the immune system, including, but not limited to, autoimmune disorders (e.g., systemic lupus erythematosus, rheumatoid arthritis, idiopathic thrombocytopenic  
30 purpura and multiple sclerosis), immunodeficiencies (e.g., X-linked agammaglobulinemia, severe combined immunodeficiency, Wiskott-Aldrich syndrome, and ataxia telangiectasia), chronic infections (e.g., HIV, viral hepatitis, and herpesvirus), and neoplastic disorders. See, e.g. "Immune Activity" section *infra*. Additionally, immune related molecules would be useful as agents to boost immune responsiveness to pathogens or to suppress immune reactions, for example as is  
35 necessary in conjunction with organ transplantation.

### ***Summary of the Invention***

The present invention encompasses human secreted proteins/polypeptides, and isolated nucleic acid molecules encoding said proteins/polypeptides, useful for detecting, preventing, diagnosing, prognosticating, treating, and/or ameliorating immune diseases and disorders. Antibodies that bind these polypeptides are also encompassed by the present invention; as are vectors, host cells, and recombinant and synthetic methods for producing said polynucleotides, polypeptides, and/or antibodies. The invention further encompasses screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention also encompasses methods and compositions for inhibiting or enhancing the production and function of the polypeptides of the present invention.

### ***Detailed Description***

#### **Polynucleotides and Polypeptides of the Invention**

##### **Description of Table 1A**

Table 1A summarizes information concerning certain polynucleotides and polypeptides of the invention. The first column provides the gene number in the application for each clone identifier. The second column provides a unique clone identifier, "Clone ID:", for a cDNA clone related to each contig sequence disclosed in Table 1A. Third column, the cDNA Clones identified in the second column were deposited as indicated in the third column (i.e. by ATCC Deposit No:Z and deposit date). Some of the deposits contain multiple different clones corresponding to the same gene. In the fourth column, "Vector" refers to the type of vector contained in the corresponding cDNA Clone identified in the second column. In the fifth column, the nucleotide sequence identified as "NT SEQ ID NO:X" was assembled from partially homologous ("overlapping") sequences obtained from the corresponding cDNA clone identified in the second column and, in some cases, from additional related cDNA clones. The overlapping sequences were assembled into a single contiguous sequence of high redundancy (usually three to five overlapping sequences at each nucleotide position), resulting in a final sequence identified as SEQ ID NO:X. In the sixth column, "Total NT Seq." refers to the total number of nucleotides in the contig sequence identified as SEQ ID NO:X." The deposited clone may contain all or most of these sequences, reflected by the nucleotide position indicated as "5' NT of Clone Seq." (seventh column) and the "3' NT of Clone Seq." (eighth column) of SEQ ID NO:X. In the ninth column, the nucleotide position of SEQ ID NO:X of the putative start codon (methionine) is identified as "5' NT of Start Codon." Similarly, in column ten, the nucleotide position of SEQ ID NO:X of the predicted signal sequence is identified as "5' NT of First AA of Signal Pep." In the eleventh column, the translated amino acid sequence, beginning with the methionine, is identified as "AA

SEQ ID NO:Y,” although other reading frames can also be routinely translated using known molecular biology techniques. The polypeptides produced by these alternative open reading frames are specifically contemplated by the present invention.

In the twelfth and thirteenth columns of Table 1A, the first and last amino acid position of SEQ ID NO:Y of the predicted signal peptide is identified as “First AA of Sig Pep” and “Last AA of Sig Pep.” In the fourteenth column, the predicted first amino acid position of SEQ ID NO:Y of the secreted portion is identified as “Predicted First AA of Secreted Portion”. The amino acid position of SEQ ID NO:Y of the last amino acid encoded by the open reading frame is identified in the fifteenth column as “Last AA of ORF”.

SEQ ID NO:X (where X may be any of the polynucleotide sequences disclosed in the sequence listing) and the translated SEQ ID NO:Y (where Y may be any of the polypeptide sequences disclosed in the sequence listing) are sufficiently accurate and otherwise suitable for a variety of uses well known in the art and described further below. For instance, SEQ ID NO:X is useful for designing nucleic acid hybridization probes that will detect nucleic acid sequences contained in SEQ ID NO:X or the cDNA contained in the deposited clone. These probes will also hybridize to nucleic acid molecules in biological samples, thereby enabling a variety of forensic and diagnostic methods of the invention. Similarly, polypeptides identified from SEQ ID NO:Y may be used, for example, to generate antibodies which bind specifically to proteins containing the polypeptides and the secreted proteins encoded by the cDNA clones identified in Table 1A and/or elsewhere herein

Nevertheless, DNA sequences generated by sequencing reactions can contain sequencing errors. The errors exist as misidentified nucleotides, or as insertions or deletions of nucleotides in the generated DNA sequence. The erroneously inserted or deleted nucleotides cause frame shifts in the reading frames of the predicted amino acid sequence. In these cases, the predicted amino acid sequence diverges from the actual amino acid sequence, even though the generated DNA sequence may be greater than 99.9% identical to the actual DNA sequence (for example, one base insertion or deletion in an open reading frame of over 1000 bases).

Accordingly, for those applications requiring precision in the nucleotide sequence or the amino acid sequence, the present invention provides not only the generated nucleotide sequence identified as SEQ ID NO:X, and the predicted translated amino acid sequence identified as SEQ ID NO:Y, but also a sample of plasmid DNA containing a human cDNA of the invention deposited with the ATCC, as set forth in Table 1A. The nucleotide sequence of each deposited plasmid can readily be determined by sequencing the deposited plasmid in accordance with known methods

The predicted amino acid sequence can then be verified from such deposits. Moreover, the amino acid sequence of the protein encoded by a particular plasmid can also be



directly determined by peptide sequencing or by expressing the protein in a suitable host cell containing the deposited human cDNA, collecting the protein, and determining its sequence.

Also provided in Table 1A is the name of the vector which contains the cDNA plasmid. Each vector is routinely used in the art. The following additional information is provided for convenience.

Vectors Lambda Zap (U.S. Patent Nos. 5,128,256 and 5,286,636), Uni-Zap XR (U.S. Patent Nos. 5,128, 256 and 5,286,636), Zap Express (U.S. Patent Nos. 5,128,256 and 5,286,636), pBluescript (pBS) (Short, J. M. et al., *Nucleic Acids Res.* 16:7583-7600 (1988); Alting-Mees, M. A. and Short, J. M., *Nucleic Acids Res.* 17:9494 (1989)) and pBK (Alting-Mees, M. A. et al., *Strategies* 5:58-61 (1992)) are commercially available from Stratagene Cloning Systems, Inc., 11011 N. Torrey Pines Road, La Jolla, CA, 92037. pBS contains an ampicillin resistance gene and pBK contains a neomycin resistance gene. Phagemid pBS may be excised from the Lambda Zap and Uni-Zap XR vectors, and phagemid pBK may be excised from the Zap Express vector. Both phagemids may be transformed into *E. coli* strain XL-1 Blue, also available from Stratagene

Vectors pSport1, pCMVSPORT 1.0, pCMVSPORT 2.0 and pCMVSPORT 3.0, were obtained from Life Technologies, Inc., P. O. Box 6009, Gaithersburg, MD 20897. All Sport vectors contain an ampicillin resistance gene and may be transformed into *E. coli* strain DH10B, also available from Life Technologies. See, for instance, Gruber, C. E., et al., *Focus* 15:59 (1993). Vector lafmid BA (Bento Soares, Columbia University, New York, NY) contains an ampicillin resistance gene and can be transformed into *E. coli* strain XL-1 Blue. Vector pCR<sup>®</sup>2.1, which is available from Invitrogen, 1600 Faraday Avenue, Carlsbad, CA 92008, contains an ampicillin resistance gene and may be transformed into *E. coli* strain DH10B, available from Life Technologies. See, for instance, Clark, J. M., *Nuc. Acids Res.* 16:9677-9686 (1988) and Mead, D. et al., *Bio/Technology* 9: (1991).

The present invention also relates to the genes corresponding to SEQ ID NO:X, SEQ ID NO:Y, and/or a deposited cDNA (cDNA Clone ID). The corresponding gene can be isolated in accordance with known methods using the sequence information disclosed herein. Such methods include, but are not limited to, preparing probes or primers from the disclosed sequence and identifying or amplifying the corresponding gene from appropriate sources of genomic material.

Also provided in the present invention are allelic variants, orthologs, and/or species homologs. Procedures known in the art can be used to obtain full-length genes, allelic variants, splice variants, full-length coding portions, orthologs, and/or species homologs of genes corresponding to SEQ ID NO:X and SEQ ID NO:Y using information from the sequences disclosed herein or the clones deposited with the ATCC. For example, allelic variants and/or species homologs may be isolated and identified by making suitable probes or primers from the

sequences provided herein and screening a suitable nucleic acid source for allelic variants and/or the desired homologue.

5 The present invention provides a polynucleotide comprising, or alternatively consisting of, the nucleic acid sequence of SEQ ID NO:X and/or a cDNA contained in ATCC Deposit No.Z. The present invention also provides a polypeptide comprising, or alternatively, consisting of, the polypeptide sequence of SEQ ID NO:Y, a polypeptide encoded by SEQ ID NO:X, and/or a polypeptide encoded by a cDNA contained in ATCC deposit No.Z. Polynucleotides encoding a polypeptide comprising, or alternatively consisting of the polypeptide sequence of SEQ ID NO:Y, a polypeptide encoded by SEQ ID NO:X and/or a polypeptide  
10 encoded by the cDNA contained in ATCC Deposit No.Z, are also encompassed by the invention. The present invention further encompasses a polynucleotide comprising, or alternatively consisting of the complement of the nucleic acid sequence of SEQ ID NO:X, and/or the complement of the coding strand of the cDNA contained in ATCC Deposit No.Z.

#### 15 **Description of Table 1B (Comprised of Tables 1B.1 and 1B.2)**

Table 1B.1 and Table 1B.2 summarize some of the polynucleotides encompassed by the invention (including cDNA clones related to the sequences (Clone ID:), contig sequences (contig identifier (Contig ID:) and contig nucleotide sequence identifiers (SEQ ID NO:X)) and further summarizes certain characteristics of these polynucleotides and the polypeptides encoded  
20 thereby. The first column of Tables 1B.1 and 1B.2 provide the gene numbers in the application for each clone identifier. The second column of Tables 1B.1 and 1B.2 provide unique clone identifiers, "Clone ID:", for cDNA clones related to each contig sequence disclosed in Table 1A and/or Table 1B. The third column of Tables 1B.1 and 1B.2 provide unique contig identifiers, "Contig ID:" for each of the contig sequences disclosed in these tables. The fourth column of  
25 Tables 1B.1 and 1B.2 provide the sequence identifiers, "SEQ ID NO:X", for each of the contig sequences disclosed in Table 1A and/or 1B.

##### **Table 1B.1**

The fifth column of Table 1B.1, "ORF (From-To)", provides the location (i.e., nucleotide position numbers) within the polynucleotide sequence of SEQ ID NO:X that delineates  
30 the preferred open reading frame (ORF) that encodes the amino acid sequence shown in the sequence listing and referenced in Table 1B.1 as SEQ ID NO:Y (column 6). Column 7 of Table 1B.1 lists residues comprising predicted epitopes contained in the polypeptides encoded by each of the preferred ORFs (SEQ ID NO:Y). Identification of potential immunogenic regions was performed according to the method of Jameson and Wolf (CABIOS, 4; 181-186 (1988));  
35 specifically, the Genetics Computer Group (GCG) implementation of this algorithm, embodied in the program PEPTIDESTRUCTURE (Wisconsin Package v10.0, Genetics Computer Group

(GCG), Madison, Wisc.). This method returns a measure of the probability that a given residue is found on the surface of the protein. Regions where the antigenic index score is greater than 0.9 over at least 6 amino acids are indicated in Table 1B.1 as "Predicted Epitopes". In particular embodiments, polypeptides of the invention comprise, or alternatively consist of, one, two, three, four, five or more of the predicted epitopes described in Table 1B.1. It will be appreciated that depending on the analytical criteria used to predict antigenic determinants, the exact address of the determinant may vary slightly. Column 8 of Table 1B.1 ("Tissue Distribution") is described below in Table 1B.2 Column 5. Column 9 of Table 1B.1 ("Cytologic Band") provides the chromosomal location of polynucleotides corresponding to SEQ ID NO:X. Chromosomal location was determined by finding exact matches to EST and cDNA sequences contained in the NCBI (National Center for Biotechnology Information) UniGene database. Given a presumptive chromosomal location, disease locus association was determined by comparison with the Morbid Map, derived from Online Mendelian Inheritance in Man (Online Mendelian Inheritance in Man, OMIM™. McKusick-Nathans Institute for Genetic Medicine, Johns Hopkins University (Baltimore, MD) and National Center for Biotechnology Information, National Library of Medicine (Bethesda, MD) 2000. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>). If the putative chromosomal location of the Query overlaps with the chromosomal location of a Morbid Map entry, an OMIM identification number is disclosed in Table 1B.1, column 10 labeled "OMIM Disease Reference(s)". A key to the OMIM reference identification numbers is provided in Table 5.

### **Table 1B.2**

Column 5 of Table 1B.2, "Tissue Distribution" shows the expression profile of tissue, cells, and/or cell line libraries which express the polynucleotides of the invention. The first code number shown in Table 1B.2 column 5 (preceding the colon), represents the tissue/cell source identifier code corresponding to the key provided in Table 4. Expression of these polynucleotides was not observed in the other tissues and/or cell libraries tested. The second number in column 5 (following the colon), represents the number of times a sequence corresponding to the reference polynucleotide sequence (e.g., SEQ ID NO:X) was identified in the corresponding tissue/cell source. Those tissue/cell source identifier codes in which the first two letters are "AR" designate information generated using DNA array technology. Utilizing this technology, cDNAs were amplified by PCR and then transferred, in duplicate, onto the array. Gene expression was assayed through hybridization of first strand cDNA probes to the DNA array. cDNA probes were generated from total RNA extracted from a variety of different tissues and cell lines. Probe synthesis was performed in the presence of <sup>33</sup>P dCTP, using oligo(dT) to prime reverse transcription. After hybridization, high stringency washing conditions were employed to remove non-specific hybrids from the array. The remaining signal, emanating from each gene target, was measured using a Phosphorimager. Gene expression was reported as Phosphor Stimulating Luminescence (PSL)

which reflects the level of phosphor signal generated from the probe hybridized to each of the gene targets represented on the array. A local background signal subtraction was performed before the total signal generated from each array was used to normalize gene expression between the different hybridizations. The value presented after “[array code]:” represents the mean of the duplicate values, following background subtraction and probe normalization. One of skill in the art could routinely use this information to identify normal and/or diseased tissue(s) which show a predominant expression pattern of the corresponding polynucleotide of the invention or to identify polynucleotides which show predominant and/or specific tissue and/or cell expression.

#### 10      **Description of Table 1C**

Table 1C summarizes additional polynucleotides encompassed by the invention (including cDNA clones related to the sequences (Clone ID:), contig sequences (contig identifier (Contig ID:) contig nucleotide sequence identifiers (SEQ ID NO:X)), and genomic sequences (SEQ ID NO:B). The first column provides a unique clone identifier, “Clone ID:”, for a cDNA clone related to each contig sequence. The second column provides the sequence identifier, “SEQ ID NO:X”, for each contig sequence. The third column provides a unique contig identifier, “Contig ID:” for each contig sequence. The fourth column, provides a BAC identifier “BAC ID NO:A” for the BAC clone referenced in the corresponding row of the table. The fifth column provides the nucleotide sequence identifier, “SEQ ID NO:B” for a fragment of the BAC clone identified in column four of the corresponding row of the table. The sixth column, “Exon From-To”, provides the location (i.e., nucleotide position numbers) within the polynucleotide sequence of SEQ ID NO:B which delineate certain polynucleotides of the invention that are also exemplary members of polynucleotide sequences that encode polypeptides of the invention (e.g., polypeptides containing amino acid sequences encoded by the polynucleotide sequences delineated in column six, and fragments and variants thereof).

#### **Description of Table 1D**

Table 1D: In preferred embodiments, the present invention encompasses a method of detecting, preventing, diagnosing, prognosticating, treating, and/or ameliorating immune diseases or disorders; comprising administering to a patient in which such treatment, prevention, or amelioration is desired a protein, nucleic acid, or antibody of the invention (or fragment or variant thereof) represented by Table 1A, Table 1B, and Table 1C, in an amount effective to detect, prevent, diagnose, prognosticate, treat, and/or ameliorate the disease or disorder.

As indicated in Table 1D, the polynucleotides, polypeptides, agonists, or antagonists of the present invention (including antibodies) can be used in assays to test for one or more biological activities. If these polynucleotides and polypeptides do exhibit activity in a particular

assay, it is likely that these molecules may be involved in the diseases associated with the biological activity. Thus, the polynucleotides or polypeptides, or agonists or antagonists thereof (including antibodies) could be used to treat the associated disease.

Table 1D provides information related to biological activities for polynucleotides and polypeptides of the invention (including antibodies, agonists, and/or antagonists thereof). Table 1D also provides information related to assays which may be used to test polynucleotides and polypeptides of the invention (including antibodies, agonists, and/or antagonists thereof) for the corresponding biological activities. The first column ("Gene No.") provides the gene number in the application for each clone identifier. The second column ("cDNA Clone ID:") provides the unique clone identifier for each clone as previously described and indicated in Tables 1A, 1B, and 1C. The third column ("AA SEQ ID NO:Y") indicates the Sequence Listing SEQ ID Number for polypeptide sequences encoded by the corresponding cDNA clones (also as indicated in Tables 1A, 1B, and 2). The fourth column ("Biological Activity") indicates a biological activity corresponding to the indicated polypeptides (or polynucleotides encoding said polypeptides). The fifth column ("Exemplary Activity Assay") further describes the corresponding biological activity and provides information pertaining to the various types of assays which may be performed to test, demonstrate, or quantify the corresponding biological activity. Table 1D describes the use of FMAT technology, *inter alia*, for testing or demonstrating various biological activities. Fluorometric microvolume assay technology (FMAT) is a fluorescence-based system that provides a means to perform nonradioactive cell- and bead-based assays to detect activation of cell signal transduction pathways. This technology was designed specifically for ligand binding and immunological assays. Using this technology, fluorescent cells or beads at the bottom of the well are detected as localized areas of concentrated fluorescence using a data processing system. Unbound fluorophore comprising the background signal is ignored, allowing for a wide variety of homogeneous assays. FMAT technology may be used for peptide ligand binding assays, immunofluorescence, apoptosis, cytotoxicity, and bead-based immunocapture assays. *See*, Miraglia S et. al., "Homogeneous cell and bead based assays for highthroughput screening using fluorometric microvolume assay technology," Journal of Biomolecular Screening; 4:193-204 (1999). In particular, FMAT technology may be used to test, confirm, and/or identify the ability of polypeptides (including polypeptide fragments and variants) to activate signal transduction pathways. For example, FMAT technology may be used to test, confirm, and/or identify the ability of polypeptides to upregulate production of immunomodulatory proteins (such as, for example, interleukins, GM-CSF, Rantes, and Tumor Necrosis factors, as well as other cellular regulators (e.g. insulin)).

Table 1D also describes the use of kinase assays for testing, demonstrating, or quantifying biological activity. In this regard, the phosphorylation and de-phosphorylation of specific amino acid residues (e.g. Tyrosine, Serine, Threonine) on cell-signal transduction proteins

provides a fast, reversible means for activation and de-activation of cellular signal transduction pathways. Moreover, cell signal transduction via phosphorylation/de-phosphorylation is crucial to the regulation of a wide variety of cellular processes (e.g. proliferation, differentiation, migration, apoptosis, etc.). Accordingly, kinase assays provide a powerful tool useful for testing, confirming, and/or identifying polypeptides (including polypeptide fragments and variants) that mediate cell signal transduction events via protein phosphorylation. See e.g., Forrer, P., Tamaskovic R., and Jaussi, R. "Enzyme-Linked Immunosorbent Assay for Measurement of JNK, ERK, and p38 Kinase Activities" Biol. Chem. 379(8-9): 1101-1110 (1998).

## 10 Description of Table 1E

Polynucleotides encoding polypeptides of the present invention can be used in assays to test for one or more biological activities. One such biological activity which may be tested includes the ability of polynucleotides and polypeptides of the invention to stimulate up-regulation or down-regulation of expression of particular genes and proteins. Hence, if polynucleotides and polypeptides of the present invention exhibit activity in altering particular gene and protein expression patterns, it is likely that these polynucleotides and polypeptides of the present invention may be involved in, or capable of effecting changes in, diseases associated with the altered gene and protein expression profiles. Hence, polynucleotides, polypeptides, or antibodies of the present invention could be used to treat said associated diseases.

20 TaqMan® assays may be performed to assess the ability of polynucleotides (and polypeptides they encode) to alter the expression pattern of particular "target" genes. TaqMan® reactions are performed to evaluate the ability of a test agent to induce or repress expression of specific genes in different cell types. TaqMan® gene expression quantification assays ("TaqMan® assays") are well known to, and routinely performed by, those of ordinary skill in the art. TaqMan® assays are performed in a two step reverse transcription / polymerase chain reaction (RT-PCR). In the first (RT) step, cDNA is reverse transcribed from total RNA samples using random hexamer primers. In the second (PCR) step, PCR products are synthesized from the cDNA using gene specific primers.

To quantify gene expression the Taqman® PCR reaction exploits the 5' nuclease activity of AmpliTaq Gold® DNA Polymerase to cleave a Taqman® probe (distinct from the primers) during PCR. The Taqman® probe contains a reporter dye at the 5'-end of the probe and a quencher dye at the 3' end of the probe. When the probe is intact, the proximity of the reporter dye to the quencher dye results in suppression of the reporter fluorescence. During PCR, if the target of interest is present, the probe specifically anneals between the forward and reverse primer sites. AmpliTaq Fold DNA Polymerase then cleaves the probe between the reporter and quencher 35 when the probe hybridizes to the target, resulting in increased fluorescence of the reporter (see

Figure 2). Accumulation of PCR products is detected directly by monitoring the increase in fluorescence of the reporter dye.

After the probe fragments are displaced from the target, polymerization of the strand continues. The 3'-end of the probe is blocked to prevent extension of the probe during PCR. This process occurs in every cycle and does not interfere with the exponential accumulation of product. The increase in fluorescence signal is detected only if the target sequence is complementary to the probe and is amplified during PCR. Because of these requirements, any nonspecific amplification is not detected.

For test sample preparation, vector controls or constructs containing the coding sequence for the gene of interest are transfected into cells, such as for example 293T cells, and supernatants collected after 48 hours. For cell treatment and RNA isolation, multiple primary human cells or human cell lines are used; such cells may include but are not limited to, Normal Human Dermal Fibroblasts, Aortic Smooth Muscle, Human Umbilical Vein Endothelial Cells, HepG2, Daudi, Jurkat, U937, Caco, and THP-1 cell lines. Cells are plated in growth media and growth is arrested by culturing without media change for 3 days, or by switching cells to low serum media and incubating overnight. Cells are treated for 1, 6, or 24 hours with either vector control supernatant or sample supernatant (or purified/partially purified protein preparations in buffer). Total RNA is isolated; for example, by using Trizol extraction or by using the Ambion RNAqueous(TM)-4PCR RNA isolation system. Expression levels of multiple genes are analyzed using TAQMAN, and expression in the test sample is compared to control vector samples to identify genes induced or repressed. Each of the above described techniques are well known to, and routinely performed by, those of ordinary skill in the art.

Table 1E indicates particular disease classes and preferred indications for which polynucleotides, polypeptides, or antibodies of the present invention may be used in detecting, diagnosing, preventing, treating and/or ameliorating said diseases and disorders based on "target" gene expression patterns which may be up- or down-regulated by polynucleotides (and the encoded polypeptides) corresponding to each indicated cDNA Clone ID (shown in Table 1E, Column 2).

Thus, in preferred embodiments, the present invention encompasses a method of detecting, diagnosing, preventing, treating, and/or ameliorating a disease or disorder listed in the "Disease Class" and/or "Preferred Indication" columns of Table 1E; comprising administering to a patient in which such detection, diagnosis, prevention, or treatment is desired a protein, nucleic acid, or antibody of the invention (or fragment or variant thereof) in an amount effective to detect, diagnose, prevent, treat, or ameliorate the disease or disorder. The first and second columns of Table 1D show the "Gene No." and "cDNA Clone ID No.", respectively, indicating certain nucleic acids and proteins (or antibodies against the same) of the invention (including polynucleotide, polypeptide, and antibody fragments or variants thereof) that may be used in detecting, diagnosing,

preventing, treating, or ameliorating the disease(s) or disorder(s) indicated in column 6 and as indicated in the corresponding row in the "Disease Class" or "Preferred Indication" Columns of Table 1E.

In another embodiment, the present invention also encompasses methods of detecting, diagnosing, preventing, treating, or ameliorating a disease or disorder listed in the "Disease Class" or "Preferred Indication" Columns of Table 1E; comprising administering to a patient combinations of the proteins, nucleic acids, or antibodies of the invention (or fragments or variants thereof), sharing similar indications as shown in the corresponding rows in the "Disease Class" or "Preferred Indication" Columns of Table 1E.

The "Disease Class" Column of Table 1E provides a categorized descriptive heading for diseases, disorders, and/or conditions (more fully described below) that may be detected, diagnosed, prevented, treated, or ameliorated by a protein, nucleic acid, or antibody of the invention (or fragment or variant thereof).

The "Preferred Indication" Column of Table 1E describes diseases, disorders, and/or conditions that may be detected, diagnosed, prevented, treated, or ameliorated by a protein, nucleic acid, or antibody of the invention (or fragment or variant thereof).

The "Cell Line" and "Exemplary Targets" Columns of Table 1E indicate particular cell lines and target genes, respectively, which may show altered gene expression patterns (i.e., up- or down-regulation of the indicated target gene) in Taqman assays, performed as described above, utilizing polynucleotides of the cDNA Clone ID shown in the corresponding row. Alteration of expression patterns of the indicated "Exemplary Target" genes is correlated with a particular "Disease Class" and/or "Preferred Indication" as shown in the corresponding row under the respective column headings.

The "Exemplary Accessions" Column indicates GenBank Accessions (available online through the National Center for Biotechnology Information (NCBI) at <http://www.ncbi.nlm.nih.gov/>) which correspond to the "Exemplary Targets" shown in the adjacent row.

The recitation of "Cancer" in the "Disease Class" Column indicates that the corresponding nucleic acid and protein, or antibody against the same, of the invention (or fragment or variant thereof) may be used for example, to detect, diagnose, prevent, treat, and/or ameliorate neoplastic diseases and/or disorders (e.g., leukemias, cancers, etc., as described below under "Hyperproliferative Disorders").

The recitation of "Immune" in the "Disease Class" column indicates that the corresponding nucleic acid and protein, or antibody against the same, of the invention (or fragment or variant thereof), may be used for example, to detect, diagnose, prevent, treat, and/or ameliorate diseases and/or disorders relating to neoplastic diseases (e.g., as described below under "Hyperproliferative Disorders"), blood disorders (e.g., as described below under "Immune



Activity” “Cardiovascular Disorders” and/or “Blood-Related Disorders”), and infections (e.g., as described below under “Infectious Disease”).

The recitation of “Angiogenesis” in the “Disease Class” column indicates that the corresponding nucleic acid and protein, or antibody against the same, of the invention (or fragment or variant thereof), may be used for example, to detect, diagnose, treat, prevent, and/or ameliorate diseases and/or disorders relating to neoplastic diseases (e.g., as described below under “Hyperproliferative Disorders”), diseases and/or disorders of the cardiovascular system (e.g., as described below under “Cardiovascular Disorders”), diseases and/or disorders involving cellular and genetic abnormalities (e.g., as described below under “Diseases at the Cellular Level”), diseases and/or disorders involving angiogenesis (e.g., as described below under “Anti-Angiogenesis Activity”), to promote or inhibit cell or tissue regeneration (e.g., as described below under “Regeneration”), or to promote wound healing (e.g., as described below under “Wound Healing and Epithelial Cell Proliferation”).

The recitation of “Diabetes” in the “Disease Class” column indicates that the corresponding nucleic acid and protein, or antibody against the same, of the invention (or fragment or variant thereof), may be used for example, to detect, diagnose, treat, prevent, and/or ameliorate diabetes (including diabetes mellitus types I and II), as well as diseases and/or disorders associated with, or consequential to, diabetes (e.g. as described below under “Endocrine Disorders,” “Renal Disorders,” and “Gastrointestinal Disorders”).

## **Description of Table 2**

Table 2 summarizes homology and features of some of the polypeptides of the invention. The first column provides a unique clone identifier, “Clone ID:”, corresponding to a cDNA clone disclosed in Table 1A or Table 1B. The second column provides the unique contig identifier, “Contig ID:” corresponding to contigs in Table 1B and allowing for correlation with the information in Table 1B. The third column provides the sequence identifier, “SEQ ID NO:X”, for the contig polynucleotide sequence. The fourth column provides the analysis method by which the homology/identity disclosed in the Table was determined. Comparisons were made between polypeptides encoded by the polynucleotides of the invention and either a non-redundant protein database (herein referred to as “NR”), or a database of protein families (herein referred to as “PFAM”) as further described below. The fifth column provides a description of the PFAM/NR hit having a significant match to a polypeptide of the invention. Column six provides the accession number of the PFAM/NR hit disclosed in the fifth column. Column seven, “Score/Percent Identity”, provides a quality score or the percent identity, of the hit disclosed in columns five and six. Columns 8 and 9, “NT From” and “NT To” respectively, delineate the polynucleotides in “SEQ ID NO:X” that encode a polypeptide having a significant match to the PFAM/NR database as disclosed in the fifth and sixth columns. In specific embodiments

polypeptides of the invention comprise, or alternatively consist of, an amino acid sequence encoded by a polynucleotide in SEQ ID NO:X as delineated in columns 8 and 9, or fragments or variants thereof.

### 5     **Description of Table 3**

Table 3 provides polynucleotide sequences that may be disclaimed according to certain embodiments of the invention. The first column provides a unique clone identifier, "Clone ID", for a cDNA clone related to contig sequences disclosed in Table 1B. The second column provides the sequence identifier, "SEQ ID NO:X", for contig sequences disclosed in Table 1A and/or Table 1B. The third column provides the unique contig identifier, "Contig ID:", for contigs disclosed in Table 1B. The fourth column provides a unique integer 'a' where 'a' is any integer between 1 and the final nucleotide minus 15 of SEQ ID NO:X, and the fifth column provides a unique integer 'b' where 'b' is any integer between 15 and the final nucleotide of SEQ ID NO:X, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:X, and where b is greater than or equal to a + 14. For each of the polynucleotides shown as SEQ ID NO:X, the uniquely defined integers can be substituted into the general formula of a-b, and used to describe polynucleotides which may be preferably excluded from the invention. In certain embodiments, preferably excluded from the invention are at least one, two, three, four, five, ten, or more of the polynucleotide sequence(s) having the accession number(s) disclosed in the sixth column of this Table (including for example, published sequence in connection with a particular BAC clone). In further embodiments, preferably excluded from the invention are the specific polynucleotide sequence(s) contained in the clones corresponding to at least one, two, three, four, five, ten, or more of the available material having the accession numbers identified in the sixth column of this Table (including for example, the actual sequence contained in an identified BAC clone).

### **Description of Table 4**

Table 4 provides a key to the tissue/cell source identifier code disclosed in Table 1B.2, column 5. Column 1 provides the tissue/cell source identifier code disclosed in Table 1B.2, column 5. Columns 2-5 provide a description of the tissue or cell source. Note that "Description" and "Tissue" sources (i.e. columns 2 and 3) having the prefix "a\_" indicates organs, tissues, or cells derived from "adult" sources. Codes corresponding to diseased tissues are indicated in column 6 with the word "disease." The use of the word "disease" in column 6 is non-limiting. The tissue or cell source may be specific (e.g. a neoplasm), or may be disease-associated (e.g., a tissue sample from a normal portion of a diseased organ). Furthermore, tissues and/or cells lacking the "disease" designation may still be derived from sources directly or indirectly involved in a disease state or disorder, and therefore may have a further utility in that disease state or

disorder. In numerous cases where the tissue/cell source is a library, column 7 identifies the vector used to generate the library.

#### **Description of Table 5**

5                   Table 5 provides a key to the OMIM reference identification numbers disclosed in Table 1B.1, column 9. OMIM reference identification numbers (Column 1) were derived from Online Mendelian Inheritance in Man (Online Mendelian Inheritance in Man, OMIM. McKusick-Nathans Institute for Genetic Medicine, Johns Hopkins University (Baltimore, MD) and National Center for Biotechnology Information, National Library of Medicine, (Bethesda, MD) 2000. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>). Column 2 provides diseases associated with the cytologic band disclosed in, column 9, as determined using the Morbid Map database.

#### **Description of Table 6**

15                   Table 6 summarizes some of the ATCC Deposits, Deposit dates, and ATCC designation numbers of deposits made with the ATCC in connection with the present application. These deposits were made in addition to those described in the Table 1A.

#### **Description of Table 7**

20                   Table 7 shows the cDNA libraries sequenced, and ATCC designation numbers and vector information relating to these cDNA libraries.

                    The first column shows the first four letters indicating the Library from which each library clone was derived. The second column indicates the catalogued tissue description for the corresponding libraries. The third column indicates the vector containing the corresponding clones. The fourth column shows the ATCC deposit designation for each library clone as indicated by the deposit information in Table 6.

#### **30    Definitions**

                    The following definitions are provided to facilitate understanding of certain terms used throughout this specification.

35                   In the present invention, "isolated" refers to material removed from its original environment (e.g., the natural environment if it is naturally occurring), and thus is altered "by the hand of man" from its natural state. For example, an isolated polynucleotide could be part of a vector or a composition of matter, or could be contained within a cell, and still be "isolated"

because that vector, composition of matter, or particular cell is not the original environment of the polynucleotide. The term "isolated" does not refer to genomic or cDNA libraries, whole cell total or mRNA preparations, genomic DNA preparations (including those separated by electrophoresis and transferred onto blots), sheared whole cell genomic DNA preparations or other compositions where the art demonstrates no distinguishing features of the polynucleotide/sequences of the present invention.

In the present invention, a "secreted" protein refers to those proteins capable of being directed to the ER, secretory vesicles, or the extracellular space as a result of a signal sequence, as well as those proteins released into the extracellular space without necessarily containing a signal sequence. If the secreted protein is released into the extracellular space, the secreted protein can undergo extracellular processing to produce a "mature" protein. Release into the extracellular space can occur by many mechanisms, including exocytosis and proteolytic cleavage.

As used herein, a "polynucleotide" refers to a molecule having a nucleic acid sequence encoding SEQ ID NO:Y or a fragment or variant thereof (e.g., the polypeptide delineated in columns fourteen and fifteen of Table 1A); a nucleic acid sequence contained in SEQ ID NO:X (as described in column 5 of Table 1A and/or Table 1B) or the complement thereof; a cDNA sequence contained in Clone ID: (as described in column 2 of Table 1A and/or Table 1B and contained within a library deposited with the ATCC); a nucleotide sequence encoding the polypeptide encoded by a nucleotide sequence in SEQ ID NO:B as defined in column 6 (EXON From-To) of Table 1C or a fragment or variant thereof; or a nucleotide coding sequence in SEQ ID NO:B as defined in column 6 of Table 1C or the complement thereof. For example, the polynucleotide can contain the nucleotide sequence of the full length cDNA sequence, including the 5' and 3' untranslated sequences, the coding region, as well as fragments, epitopes, domains, and variants of the nucleic acid sequence. Moreover, as used herein, a "polypeptide" refers to a molecule having an amino acid sequence encoded by a polynucleotide of the invention as broadly defined (obviously excluding poly-Phenylalanine or poly-Lysine peptide sequences which result from translation of a polyA tail of a sequence corresponding to a cDNA).

In the present invention, "SEQ ID NO:X" was often generated by overlapping sequences contained in multiple clones (contig analysis). A representative clone containing all or most of the sequence for SEQ ID NO:X is deposited at Human Genome Sciences, Inc. (HGS) in a catalogued and archived library. As shown, for example, in column 2 of Table 1B, each clone is identified by a cDNA Clone ID (identifier generally referred to herein as Clone ID:). Each Clone ID is unique to an individual clone and the Clone ID is all the information needed to retrieve a given clone from the HGS library. Table 7 provides a list of the deposited cDNA libraries. One can use the Clone ID: to determine the library source by reference to Tables 6 and 7. Table 7 lists the deposited cDNA libraries by name and links each library to an ATCC Deposit. Library names

contain four characters, for example, "HTWE." The name of a cDNA clone (Clone ID) isolated from that library begins with the same four characters, for example "HTWEP07". As mentioned below, Table 1A and/or Table 1B correlates the Clone ID names with SEQ ID NO:X. Thus, starting with an SEQ ID NO:X, one can use Tables 1A, 1B, 6, 7, and 9 to determine the corresponding Clone ID, which library it came from and which ATCC deposit the library is contained in. Furthermore, it is possible to retrieve a given cDNA clone from the source library by techniques known in the art and described elsewhere herein. The ATCC is located at 10801 University Boulevard, Manassas, Virginia 20110-2209, USA. The ATCC deposits were made pursuant to the terms of the Budapest Treaty on the international recognition of the deposit of microorganisms for the purposes of patent procedure.

In specific embodiments, the polynucleotides of the invention are at least 15, at least 30, at least 50, at least 100, at least 125, at least 500, or at least 1000 continuous nucleotides but are less than or equal to 300 kb, 200 kb, 100 kb, 50 kb, 15 kb, 10 kb, 7.5kb, 5 kb, 2.5 kb, 2.0 kb, or 1 kb, in length. In a further embodiment, polynucleotides of the invention comprise a portion of the coding sequences, as disclosed herein, but do not comprise all or a portion of any intron. In another embodiment, the polynucleotides comprising coding sequences do not contain coding sequences of a genomic flanking gene (i.e., 5' or 3' to the gene of interest in the genome). In other embodiments, the polynucleotides of the invention do not contain the coding sequence of more than 1000, 500, 250, 100, 50, 25, 20, 15, 10, 5, 4, 3, 2, or 1 genomic flanking gene(s).

A "polynucleotide" of the present invention also includes those polynucleotides capable of hybridizing, under stringent hybridization conditions, to sequences contained in SEQ ID NO:X, or the complement thereof (e.g., the complement of any one, two, three, four, or more of the polynucleotide fragments described herein), the polynucleotide sequence delineated in columns 7 and 8 of Table 1A or the complement thereof, the polynucleotide sequence delineated in columns 8 and 9 of Table 2 or the complement thereof, and/or cDNA sequences contained in Clone ID: (e.g., the complement of any one, two, three, four, or more of the polynucleotide fragments, or the cDNA clone within the pool of cDNA clones deposited with the ATCC, described herein), and/or the polynucleotide sequence delineated in column 6 of Table 1C or the complement thereof. "Stringent hybridization conditions" refers to an overnight incubation at 42 degree C in a solution comprising 50% formamide, 5x SSC (750 mM NaCl, 75 mM trisodium citrate), 50 mM sodium phosphate (pH 7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 µg/ml denatured, sheared salmon sperm DNA, followed by washing the filters in 0.1x SSC at about 65 degree C.

Also contemplated are nucleic acid molecules that hybridize to the polynucleotides of the present invention at lower stringency hybridization conditions. Changes in the stringency of hybridization and signal detection are primarily accomplished through the manipulation of

formamide concentration (lower percentages of formamide result in lowered stringency); salt conditions, or temperature. For example, lower stringency conditions include an overnight incubation at 37 degree C in a solution comprising 6X SSPE (20X SSPE = 3M NaCl; 0.2M NaH<sub>2</sub>PO<sub>4</sub>; 0.02M EDTA, pH 7.4), 0.5% SDS, 30% formamide, 100 ug/ml salmon sperm blocking DNA; followed by washes at 50 degree C with 1XSSPE, 0.1% SDS. In addition, to achieve even lower stringency, washes performed following stringent hybridization can be done at higher salt concentrations (e.g. 5X SSC).

Note that variations in the above conditions may be accomplished through the inclusion and/or substitution of alternate blocking reagents used to suppress background in hybridization experiments. Typical blocking reagents include Denhardt's reagent, BLOTTO, heparin, denatured salmon sperm DNA, and commercially available proprietary formulations. The inclusion of specific blocking reagents may require modification of the hybridization conditions described above, due to problems with compatibility.

Of course, a polynucleotide which hybridizes only to polyA<sup>+</sup> sequences (such as any 3' terminal polyA<sup>+</sup> tract of a cDNA shown in the sequence listing), or to a complementary stretch of T (or U) residues, would not be included in the definition of "polynucleotide," since such a polynucleotide would hybridize to any nucleic acid molecule containing a poly (A) stretch or the complement thereof (e.g., practically any double-stranded cDNA clone generated using oligo dT as a primer).

The polynucleotide of the present invention can be composed of any polyribonucleotide or polydeoxribonucleotide, which may be unmodified RNA or DNA or modified RNA or DNA. For example, polynucleotides can be composed of single- and double-stranded DNA, DNA that is a mixture of single- and double-stranded regions, single- and double-stranded RNA, and RNA that is mixture of single- and double-stranded regions, hybrid molecules comprising DNA and RNA that may be single-stranded or, more typically, double-stranded or a mixture of single- and double-stranded regions. In addition, the polynucleotide can be composed of triple-stranded regions comprising RNA or DNA or both RNA and DNA. A polynucleotide may also contain one or more modified bases or DNA or RNA backbones modified for stability or for other reasons. "Modified" bases include, for example, tritylated bases and unusual bases such as inosine. A variety of modifications can be made to DNA and RNA; thus, "polynucleotide" embraces chemically, enzymatically, or metabolically modified forms.

In specific embodiments, the polynucleotides of the invention are at least 15, at least 30, at least 50, at least 100, at least 125, at least 500, or at least 1000 continuous nucleotides but are less than or equal to 300 kb, 200 kb, 100 kb, 50 kb, 15 kb, 10 kb, 7.5kb, 5 kb, 2.5 kb, 2.0 kb, or 1 kb, in length. In a further embodiment, polynucleotides of the invention comprise a portion of the coding sequences, as disclosed herein, but do not comprise all or a portion of any intron. In

another embodiment, the polynucleotides comprising coding sequences do not contain coding sequences of a genomic flanking gene (i.e., 5' or 3' to the gene of interest in the genome). In other embodiments, the polynucleotides of the invention do not contain the coding sequence of more than 1000, 500, 250, 100, 50, 25, 20, 15, 10, 5, 4, 3, 2, or 1 genomic flanking gene(s).

5 "SEQ ID NO:X" refers to a polynucleotide sequence described in column 5 of Table 1A, while "SEQ ID NO:Y" refers to a polypeptide sequence described in column 10 of Table 1A. SEQ ID NO:X is identified by an integer specified in column 6 of Table 1A. The polypeptide sequence SEQ ID NO:Y is a translated open reading frame (ORF) encoded by polynucleotide SEQ ID NO:X. The polynucleotide sequences are shown in the sequence listing immediately followed  
10 by all of the polypeptide sequences. Thus, a polypeptide sequence corresponding to polynucleotide sequence SEQ ID NO:2 is the first polypeptide sequence shown in the sequence listing. The second polypeptide sequence corresponds to the polynucleotide sequence shown as SEQ ID NO:3, and so on.

The polypeptide of the present invention can be composed of amino acids joined to  
15 each other by peptide bonds or modified peptide bonds, i.e., peptide isosteres, and may contain amino acids other than the 20 gene-encoded amino acids. The polypeptides may be modified by either natural processes, such as posttranslational processing, or by chemical modification techniques which are well known in the art. Such modifications are well described in basic texts and in more detailed monographs, as well as in a voluminous research literature. Modifications  
20 can occur anywhere in a polypeptide, including the peptide backbone, the amino acid side-chains and the amino or carboxyl termini. It will be appreciated that the same type of modification may be present in the same or varying degrees at several sites in a given polypeptide. Also, a given polypeptide may contain many types of modifications. Polypeptides may be branched, for example, as a result of ubiquitination, and they may be cyclic, with or without branching. Cyclic,  
25 branched, and branched cyclic polypeptides may result from posttranslation natural processes or may be made by synthetic methods. Modifications include acetylation, acylation, ADP-ribosylation, amidation, covalent attachment of flavin, covalent attachment of a heme moiety, covalent attachment of a nucleotide or nucleotide derivative, covalent attachment of a lipid or lipid derivative, covalent attachment of phosphatidylinositol, cross-linking, cyclization, disulfide bond  
30 formation, demethylation, formation of covalent cross-links, formation of cysteine, formation of pyroglutamate, formylation, gamma-carboxylation, glycosylation, GPI anchor formation, hydroxylation, iodination, methylation, myristoylation, oxidation, pegylation, proteolytic processing, phosphorylation, prenylation, racemization, selenoylation, sulfation, transfer-RNA mediated addition of amino acids to proteins such as arginylation, and ubiquitination. (See, for  
35 instance, PROTEINS - STRUCTURE AND MOLECULAR PROPERTIES, 2nd Ed., T. E. Creighton, W. H. Freeman and Company, New York (1993); POSTTRANSLATIONAL COVALENT MODIFICATION OF PROTEINS, B. C. Johnson, Ed., Academic Press, New

York, pgs. 1-12 (1983); Seifter et al., Meth. Enzymol. 182:626-646 (1990); Rattan et al., Ann. N.Y. Acad. Sci. 663:48-62 (1992)).

"SEQ ID NO:X" refers to a polynucleotide sequence described, for example, in Tables 1A, Table 1B, or Table 2, while "SEQ ID NO:Y" refers to a polypeptide sequence described in column 11 of Table 1A and or Table 1B. SEQ ID NO:X is identified by an integer specified in column 4 of Table 1B. The polypeptide sequence SEQ ID NO:Y is a translated open reading frame (ORF) encoded by polynucleotide SEQ ID NO:X. "Clone ID:" refers to a cDNA clone described in column 2 of Table 1A and/or 1B.

"A polypeptide having functional activity" refers to a polypeptide capable of displaying one or more known functional activities associated with a full-length (complete) protein. Such functional activities include, but are not limited to, biological activity (e.g. activity useful in treating, preventing and/or ameliorating immune diseases and disorders), antigenicity (ability to bind [or compete with a polypeptide for binding] to an anti-polypeptide antibody), immunogenicity (ability to generate antibody which binds to a specific polypeptide of the invention), ability to form multimers with polypeptides of the invention, and ability to bind to a receptor or ligand for a polypeptide.

The polypeptides of the invention can be assayed for functional activity (e.g. biological activity) using or routinely modifying assays known in the art, as well as assays described herein. Specifically, one of skill in the art may routinely assay secreted polypeptides (including fragments and variants) of the invention for activity using assays as described in the examples section below.

"A polypeptide having biological activity" refers to a polypeptide exhibiting activity similar to, but not necessarily identical to, an activity of a polypeptide of the present invention, including mature forms, as measured in a particular biological assay, with or without dose dependency. In the case where dose dependency does exist, it need not be identical to that of the polypeptide, but rather substantially similar to the dose-dependence in a given activity as compared to the polypeptide of the present invention (i.e., the candidate polypeptide will exhibit greater activity or not more than about 25-fold less and, preferably, not more than about tenfold less activity, and most preferably, not more than about three-fold less activity relative to the polypeptide of the present invention).

## **TABLES**

### **Table 1A**

Table 1A summarizes information concerning certain polynucleotides and polypeptides of the invention. The first column provides the gene number in the application for



each clone identifier. The second column provides a unique clone identifier, "Clone ID:", for a cDNA clone related to each contig sequence disclosed in Table 1A. Third column, the cDNA Clones identified in the second column were deposited as indicated in the third column (i.e. by ATCC Deposit No:Z and deposit date). Some of the deposits contain multiple different clones corresponding to the same gene. In the fourth column, "Vector" refers to the type of vector contained in the corresponding cDNA Clone identified in the second column. In the fifth column, the nucleotide sequence identified as "NT SEQ ID NO:X" was assembled from partially homologous ("overlapping") sequences obtained from the corresponding cDNA clone identified in the second column and, in some cases, from additional related cDNA clones. The overlapping sequences were assembled into a single contiguous sequence of high redundancy (usually three to five overlapping sequences at each nucleotide position), resulting in a final sequence identified as SEQ ID NO:X. In the sixth column, "Total NT Seq." refers to the total number of nucleotides in the contig sequence identified as SEQ ID NO:X." The deposited clone may contain all or most of these sequences, reflected by the nucleotide position indicated as "5' NT of Clone Seq." (seventh column) and the "3' NT of Clone Seq." (eighth column) of SEQ ID NO:X. In the ninth column, the nucleotide position of SEQ ID NO:X of the putative start codon (methionine) is identified as "5' NT of Start Codon." Similarly, in column ten, the nucleotide position of SEQ ID NO:X of the predicted signal sequence is identified as "5' NT of First AA of Signal Pep." In the eleventh column, the translated amino acid sequence, beginning with the methionine, is identified as "AA SEQ ID NO:Y," although other reading frames can also be routinely translated using known molecular biology techniques. The polypeptides produced by these alternative open reading frames are specifically contemplated by the present invention.

In the twelfth and thirteenth columns of Table 1A, the first and last amino acid position of SEQ ID NO:Y of the predicted signal peptide is identified as "First AA of Sig Pep" and "Last AA of Sig Pep." In the fourteenth column, the predicted first amino acid position of SEQ ID NO:Y of the secreted portion is identified as "Predicted First AA of Secreted Portion". The amino acid position of SEQ ID NO:Y of the last amino acid encoded by the open reading frame is identified in the fifteenth column as "Last AA of ORF".

SEQ ID NO:X (where X may be any of the polynucleotide sequences disclosed in the sequence listing) and the translated SEQ ID NO:Y (where Y may be any of the polypeptide sequences disclosed in the sequence listing) are sufficiently accurate and otherwise suitable for a variety of uses well known in the art and described further below. For instance, SEQ ID NO:X is useful for designing nucleic acid hybridization probes that will detect nucleic acid sequences contained in SEQ ID NO:X or the cDNA contained in the deposited clone. These probes will also hybridize to nucleic acid molecules in biological samples, thereby enabling a variety of forensic and diagnostic methods of the invention. Similarly, polypeptides identified from SEQ ID NO:Y may be used, for example, to generate antibodies which bind specifically to proteins containing the

polypeptides and the secreted proteins encoded by the cDNA clones identified in Table 1A and/or elsewhere herein

Nevertheless, DNA sequences generated by sequencing reactions can contain sequencing errors. The errors exist as misidentified nucleotides, or as insertions or deletions of nucleotides in the generated DNA sequence. The erroneously inserted or deleted nucleotides cause frame shifts in the reading frames of the predicted amino acid sequence. In these cases, the predicted amino acid sequence diverges from the actual amino acid sequence, even though the generated DNA sequence may be greater than 99.9% identical to the actual DNA sequence (for example, one base insertion or deletion in an open reading frame of over 1000 bases).

Accordingly, for those applications requiring precision in the nucleotide sequence or the amino acid sequence, the present invention provides not only the generated nucleotide sequence identified as SEQ ID NO:X, and the predicted translated amino acid sequence identified as SEQ ID NO:Y, but also a sample of plasmid DNA containing a human cDNA of the invention deposited with the ATCC, as set forth in Table 1A. The nucleotide sequence of each deposited plasmid can readily be determined by sequencing the deposited plasmid in accordance with known methods

The predicted amino acid sequence can then be verified from such deposits. Moreover, the amino acid sequence of the protein encoded by a particular plasmid can also be directly determined by peptide sequencing or by expressing the protein in a suitable host cell containing the deposited human cDNA, collecting the protein, and determining its sequence.

Also provided in Table 1A is the name of the vector which contains the cDNA plasmid. Each vector is routinely used in the art. The following additional information is provided for convenience.

Vectors Lambda Zap (U.S. Patent Nos. 5,128,256 and 5,286,636), Uni-Zap XR (U.S. Patent Nos. 5,128, 256 and 5,286,636), Zap Express (U.S. Patent Nos. 5,128,256 and 5,286,636), pBluescript (pBS) (Short, J. M. et al., *Nucleic Acids Res.* 16:7583-7600 (1988); Alting-Mees, M. A. and Short, J. M., *Nucleic Acids Res.* 17:9494 (1989)) and pBK (Alting-Mees, M. A. et al., *Strategies* 5:58-61 (1992)) are commercially available from Stratagene Cloning Systems, Inc., 11011 N. Torrey Pines Road, La Jolla, CA, 92037. pBS contains an ampicillin resistance gene and pBK contains a neomycin resistance gene. Phagemid pBS may be excised from the Lambda Zap and Uni-Zap XR vectors, and phagemid pBK may be excised from the Zap Express vector. Both phagemids may be transformed into *E. coli* strain XL-1 Blue, also available from Stratagene

Vectors pSport1, pCMVSport 1.0, pCMVSport 2.0 and pCMVSport 3.0, were obtained from Life Technologies, Inc., P. O. Box 6009, Gaithersburg, MD 20897. All Sport vectors contain an ampicillin resistance gene and may be transformed into *E. coli* strain DH10B, also available from Life Technologies. See, for instance, Gruber, C. E., et al., *Focus* 15:59 (1993).

Vector lafmid BA (Bento Soares, Columbia University, New York, NY) contains an ampicillin resistance gene and can be transformed into *E. coli* strain XL-1 Blue. Vector pCR<sup>®</sup>2.1, which is available from Invitrogen, 1600 Faraday Avenue, Carlsbad, CA 92008, contains an ampicillin resistance gene and may be transformed into *E. coli* strain DH10B, available from Life Technologies. See, for instance, Clark, J. M., *Nuc. Acids Res.* 16:9677-9686 (1988) and Mead, D. *et al.*, *Bio/Technology* 9: (1991).

The present invention also relates to the genes corresponding to SEQ ID NO:X, SEQ ID NO:Y, and/or a deposited cDNA (cDNA Clone ID). The corresponding gene can be isolated in accordance with known methods using the sequence information disclosed herein. Such methods include, but are not limited to, preparing probes or primers from the disclosed sequence and identifying or amplifying the corresponding gene from appropriate sources of genomic material.

Also provided in the present invention are allelic variants, orthologs, and/or species homologs. Procedures known in the art can be used to obtain full-length genes, allelic variants, splice variants, full-length coding portions, orthologs, and/or species homologs of genes corresponding to SEQ ID NO:X and SEQ ID NO:Y using information from the sequences disclosed herein or the clones deposited with the ATCC. For example, allelic variants and/or species homologs may be isolated and identified by making suitable probes or primers from the sequences provided herein and screening a suitable nucleic acid source for allelic variants and/or the desired homologue.

The present invention provides a polynucleotide comprising, or alternatively consisting of, the nucleic acid sequence of SEQ ID NO:X and/or a cDNA contained in ATCC Deposit No.Z. The present invention also provides a polypeptide comprising, or alternatively, consisting of, the polypeptide sequence of SEQ ID NO:Y, a polypeptide encoded by SEQ ID NO:X, and/or a polypeptide encoded by a cDNA contained in ATCC deposit No.Z. Polynucleotides encoding a polypeptide comprising, or alternatively consisting of the polypeptide sequence of SEQ ID NO:Y, a polypeptide encoded by SEQ ID NO:X and/or a polypeptide encoded by the cDNA contained in ATCC Deposit No.Z, are also encompassed by the invention. The present invention further encompasses a polynucleotide comprising, or alternatively consisting of the complement of the nucleic acid sequence of SEQ ID NO:X, and/or the complement of the coding strand of the cDNA contained in ATCC Deposit No.Z.

TABLE 1A

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
1	H6BSF56	203917 04/08/99	Uni-ZAP XR	11	605	44	605		83	414	1	6	7	141
2	H6EEC72	PTA-793 09/27/99	Uni-ZAP XR	12	1493	1	1493		263	415	1	13	14	18
3	HACAB68	203917 04/08/99	Uni-ZAP XR	13	1300	1	1300	135	135	416	1	26	27	78
4	HACBS22	203979 04/29/99	Uni-ZAP XR	14	3239	1	3239	217	217	417	1	23	24	41
5	HACBT91	203917 04/08/99	Uni-ZAP XR	15	841	1	841		329	418	1	7	8	59
6	HADDE71	203917 04/08/99	pSport1	16	667	1	667	250	250	419	1	28	29	139
7	HADDJ13	203917 04/08/99	pSport1	17	2318	1	2318	347	347	420	1	20	21	30
8	HADMA77	203917 04/08/99	pBluescript	18	1913	763	1913		992	421	1	14	15	23
9	HADMB15	203979 04/29/99	pBluescript	19	330	1	330		238	422	1	11	12	20
10	HAGBQ12	203917 04/08/99	Uni-ZAP XR	20	743	1	743	171	171	423	1	19	20	21
11	HAGCC87	203917 04/08/99	Uni-ZAP XR	21	1592	479	1592	509	509	424	1			9
12	HAGDW20	203917 04/08/99	Uni-ZAP XR	22	1284	1	1284	238	238	425	1	16	17	17

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
13	HAGEG10	203917 04/08/99	Uni-ZAP XR	23	5684	100	2890	146	146	426	1	29	30	55
14	HAGEQ79	203917 04/08/99	Uni-ZAP XR	24	785	1	785	515	515	427	1			11
15	HAGFS57	203979 04/29/99	Uni-ZAP XR	25	874	1	874	241	241	428	1	26	27	54
16	HAGHN57	203917 04/08/99	Uni-ZAP XR	26	2440	843	2440	900	900	429	1			10
17	HAGHR18	203917 04/08/99	Uni-ZAP XR	27	1142	1	1142	28	28	430	1	17	18	32
18	HAHEA15	203979 04/29/99	Uni-ZAP XR	28	1346	1	1346	196	196	431	1			13
19	HAAJAA47	203917 04/08/99	pCMV Sport 3.0	29	1237	1	1237		192	432	1	15	16	38
20	HAAJAY92	203959 04/26/99	pCMV Sport 3.0	30	2345	1	2345	12	12	433	1	20	21	94
21	HAOAG15	203979 04/29/99	pSport1	31	5143	7	4802		8	434	1	22	23	1167
22	HAQAI92	203917 04/08/99	Uni-ZAP XR	32	607	1	602	250	250	435	1	15	16	23
23	HAQBG57	203917 04/08/99	Uni-ZAP XR	33	1048	1	1031		170	436	1	15	16	56
24	HAQCE11	203917 04/08/99	Uni-ZAP XR	34	596	1	596		262	437	1			3
25	HATBI94	203917 04/08/99	Uni-ZAP XR	35	1380	1	1380	18	18	438	1	20	21	68

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
26	HATCB45	203917 04/08/99	Uni-ZAP XR	36	903	1	903	268	268	439	1	16	17	42
27	HATCI03	203917 04/08/99	Uni-ZAP XR	37	934	1	934	271	271	440	1			17
28	HATEH20	203917 04/08/99	Uni-ZAP XR	38	850	1	850	93	93	441	1	19	20	42
29	HBAGD86	203917 04/08/99	pSport1	39	1713	293	1596	521	521	442	1	18	19	19
30	HBCJL35	PTA-794 09/27/99	pSport1	40	720	1	720	17	17	443	1	27	28	124
30	HBCJL35	PTA-794 09/27/99	pSport1	389	2878	1027	1747	1033	1033	792	1	27	28	124
31	HBGBC29	203917 04/08/99	Uni-ZAP XR	41	1856	764	1829		1016	444	1			2
32	HBGNC72	PTA-793 09/27/99	Uni-ZAP XR	42	802	1	802		550	445	1	8	9	76
33	HBHAA81	203959 04/26/99	Uni-ZAP XR	43	1647	1	1647	28	28	446	1	24	25	203
34	HBIAC29	203917 04/08/99	Uni-ZAP XR	44	1782	808	1545	1036	1036	447	1	24	25	29
35	HBICW51	203917 04/08/99	Uni-ZAP XR	45	619	1	619		289	448	1	16	17	42
36	HBJAB02	203917 04/08/99	Uni-ZAP XR	46	1693	1	1665	84	84	449	1	27	28	34
37	HB/AC65	203917 04/08/99	Uni-ZAP XR	47	1685	1	892	137	137	450	1	13	14	23

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
38	HBJBM12	203917 04/08/99	Uni-ZAP XR	48	1135	1	1135	47	47	451	1			31
39	HBJDS79	203917 04/08/99	Uni-ZAP XR	49	2325	896	2325	1032	1032	452	1	37	38	107
40	HBJEL16	203979 04/29/99	Uni-ZAP XR	50	750	1	750	115	115	453	1	24	25	36
41	HBJFK45	203917 04/08/99	Uni-ZAP XR	51	543	1	543		430	454	1			8
42	HBJKD16	203979 04/29/99	Uni-ZAP XR	52	1629	1	1629	78	78	455	1	18	19	31
43	HBMBM96	203917 04/08/99	pBluescript	53	1076	1	1076		170	456	1			4
44	HMBMX01	203917 04/08/99	pBluescript	54	1652	179	1458	363	363	457	1	18	19	28
45	HBMTX26	203917 04/08/99	Uni-ZAP XR	55	1308	1	1308	107	107	458	1	46	47	89
46	HBMUH74	PTA-181 06/07/99	Uni-ZAP XR	56	726	1	726	344	344	459	1	13	14	28
47	HBMWE61	203917 04/08/99	Uni-ZAP XR	57	1118	1	1118	238	238	460	1			9
48	HBNAX40	203917 04/08/99	Uni-ZAP XR	58	2793	2455	2793	2497	2497	461	1	18	19	49
49	HBNBJ76	203917 04/08/99	Uni-ZAP XR	59	1974	1469	1974		1603	462	1	29	30	68
50	HBQAC57	203917 04/08/99	Lambda ZAP II	60	2111	1	2111	146	146	463	1			29

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
51	HBSAK32	PTA-181 06/07/99	Uni-ZAP XR	61	592	129	592	447	447	464	1	27	28	48
52	HBXCM66	203917 04/08/99	ZAP Express	62	1010	41	1010	119	119	465	1			16
53	HBXCX15	203917 04/08/99	ZAP Express	63	1219	1	1219		1148	466	1			1
54	HCDBO32	203917 04/08/99	Uni-ZAP XR	64	2630	1480	2630	1669	1669	467	1	25	26	71
55	HCE2H52	203979 04/29/99	Uni-ZAP XR	65	1276	1	1276		29	468	1	15	16	23
56	HCE3B04	203917 04/08/99	Uni-ZAP XR	66	1807	1347	1806		1588	469	1	13	14	32
57	HCE5F78	203917 04/08/99	Uni-ZAP XR	67	1732	282	1732		566	470	1	8	9	32
58	HCEEE79	203917 04/08/99	Uni-ZAP XR	68	1052	1	1052	131	131	471	1	15	16	55
59	HCEEQ25	203917 04/08/99	Uni-ZAP XR	69	992	1	992		111	472	1	15	16	23
60	HCEEU18	203917 04/08/99	Uni-ZAP XR	70	1229	1	1229	209	209	473	1	30	31	43
61	HCEZF82	203917 04/08/99	Uni-ZAP XR	71	1811	44	1781	215	215	474	1	16	17	265
62	HCEGG08	203979 04/29/99	Uni-ZAP XR	72	2534	979	2025	1114	1114	475	1	15	16	27
63	HCFLN88	203917 04/08/99	pSport1	73	1434	1	1434	101	101	476	1	16	17	25



Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
64	HCFLT90	203917 04/08/99	pSport1	74	910	1	735		384	477	1			1
65	HCQCM24	203979 04/29/99	Lambda ZAP II	75	1929	606	1929	815	815	478	1			38
66	HCRAY10	203917 04/08/99	Uni-ZAP XR	76	788	1	788		141	479	1	36	37	145
67	HCRBF72	203917 04/08/99	Uni-ZAP XR	77	1264	101	1142	191	191	480	1	1	2	211
68	HCRNF78	203917 04/08/99	pSport1	78	892	1	892	363	363	481	1	22	23	46
69	HCUAF85	203917 04/08/99	ZAP Express	79	597	1	597	230	230	482	1	23	24	122
70	HCUCF89	203917 04/08/99	ZAP Express	80	530	1	530	189	189	483	1	18	19	29
71	HCUCK44	203957 04/26/99	ZAP Express	81	1143	578	1136	598	598	484	1	30	31	60
72	HCUDD64	203917 04/08/99	ZAP Express	82	402	150	389	256	256	485	1	35	36	49
73	HCWAE64	203917 04/08/99	ZAP Express	83	471	1	471		410	486	1			5
74	HCWUF39	203917 04/08/99	ZAP Express	84	467	1	467	282	282	487	1	9	10	22
75	HCWUL09	203917 04/08/99	ZAP Express	85	761	3	761	333	333	488	1			11
76	HDHAA42	203917 04/08/99	pCMV Sport 2.0	86	943	1	943	48	48	489	1	25	26	26

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
77	HDHEB76	203917 04/08/99	pCMVSPORT 2.0	87	497	1	497		416	490	1	11	12	12
78	HDPCW16	203960 04/26/99	pCMVSPORT 3.0	88	1536	1	1536	172	172	491	1	38	39	55
79	HDPDI72	PTA-794 09/27/99	pCMVSPORT 3.0	89	1550	1	1550	23	23	492	1	17	18	120
80	HDPDJ58	203960 04/26/99	pCMVSPORT 3.0	90	1997	1	1997	279	279	493	1			20
81	HDPEF10	PTA-181 06/07/99	pCMVSPORT 3.0	91	2582	3	2582	186	186	494	1	19	20	425
82	HDPFU43	203960 04/26/99	pCMVSPORT 3.0	92	1904	1	1889	220	220	495	1	28	29	52
83	HDPFY18	203918 04/08/99	pCMVSPORT 3.0	93	2187	1	2187	161	161	496	1			7
84	HDPIE44	PTA-794 09/27/99	pCMVSPORT 3.0	94	4115	1	4115	169	169	497	1	35	36	60
85	HDPIU94	203960 04/26/99	pCMVSPORT 3.0	95	2196	21	2196	208	208	498	1	21	22	23
86	HDPOL37	203960 04/26/99	pCMVSPORT 3.0	96	1489	1	1489	189	189	499	1	32	33	62
87	HDPOO76	203960 04/26/99	pCMVSPORT 3.0	97	645	1	645		109	500	1	15	16	16
88	HDPPD93	203960 04/26/99	pCMVSPORT 3.0	98	701	1	701	28	28	501	1			12
89	HDPPW82	203959 04/26/99	pCMVSPORT 3.0	99	552	1	552	395	395	502	1			29

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
90	HDPXN20	203960 04/26/99	pCMV/Sport 3.0	100	1756	1	1756	61	61	503	1	20	21	41
91	HDTAU35	203960 04/26/99	pCMV/Sport 2.0	101	377	1	377	260	260	504	1	12	13	17
92	HDTAV54	203960 04/26/99	pCMV/Sport 2.0	102	660	1	660	191	191	505	1	22	23	33
93	HDTGW48	203960 04/26/99	pCMV/Sport 2.0	103	2261	1	2261		375	506	1	17	18	29
94	HDTLM18	203960 04/26/99	pCMV/Sport 2.0	104	525	1	525	345	345	507	1	18	19	60
95	HE2CH58	203960 04/26/99	Uni-ZAP XR	105	809	1	809	321	321	508	1	8	9	52
96	HE2PO93	203960 04/26/99	Uni-ZAP XR	106	1323	638	1323	770	770	509	1	27	28	42
97	HE6AU52	203960 04/26/99	Uni-ZAP XR	107	845	1	845	41	41	510	1	18	19	41
98	HE6CS65	203960 04/26/99	Uni-ZAP XR	108	1526	1	1526		295	511	1	10	11	62
99	HE6DO92	203960 04/26/99	Uni-ZAP XR	109	941	1	941	38	38	512	1	20	21	25
100	HE6EY13	203979 04/29/99	Uni-ZAP XR	110	867	1	867	171	171	513	1	14	15	46
101	HE8BQ49	203960 04/26/99	Uni-ZAP XR	111	1875	12	1875	133	133	514	1			11
102	HE8SG96	PTA-181 06/07/99	Uni-ZAP XR	112	2036	1	2036	118	118	515	1	17	18	24

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
103	HE9CY05	203960 04/26/99	Uni-ZAP XR	113	1047	47	1047	55	55	516	1	21	22	235
104	HE9GG20	203960 04/26/99	Uni-ZAP XR	114	676	1	676	319	319	517	1			9
105	HEAAW94	203979 04/29/99	Uni-ZAP XR	115	924	1	924	189	189	518	1			11
106	HEBCI18	203960 04/26/99	Uni-ZAP XR	116	1121	713	1050	855	855	519	1	43	44	69
107	HEBDF77	203960 04/26/99	Uni-ZAP XR	117	1820	1	1820	681	681	520	1	29	30	36
108	HEBDQ91	203960 04/26/99	Uni-ZAP XR	118	1573	1007	1573		1211	521	1	29	30	41
109	HEBFR46	203979 04/29/99	Uni-ZAP XR	119	1304	1	1304	200	200	522	1	26	27	29
110	HEBGE07	203960 04/26/99	Uni-ZAP XR	120	1867	1	1867	106	106	523	1	25	26	42
111	HELAT35	203960 04/26/99	Uni-ZAP XR	121	2168	1	2168	215	215	524	1			20
112	HELBUS4	203960 04/26/99	Uni-ZAP XR	122	1260	1	1260	82	82	525	1			17
113	HEMEY47	203979 04/29/99	Uni-ZAP XR	123	1614	204	1614	440	440	526	1			10
114	HEOMC46	PTA-181 06/07/99	pSport1	124	939	1	939		154	527	1	40	41	51
115	HEPBA14	PTA-181 06/07/99	Uni-ZAP XR	125	746	1	746		664	528	1	13	14	15

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
116	HEQAH80	203960 04/26/99	pCMVSPORT 3.0	126	1647	1	1647	150	150	529	1	26	27	32
117	HETDW58	203979 04/29/99	Uni-ZAP XR	127	1533	328	1533	541	541	530	1	16	17	22
118	HETDY67	203960 04/26/99	Uni-ZAP XR	128	1778	1	1778		292	531	1	13	14	66
119	HFCDW95	203979 04/29/99	Uni-ZAP XR	129	871	1	871		151	532	1			2
120	HFCFD04	203960 04/26/99	Uni-ZAP XR	130	1437	1	1437	170	170	533	1			15
121	HFEAY59	203960 04/26/99	Uni-ZAP XR	131	1153	1	1153	154	154	534	1	24	25	40
122	HFEBO17	PTA-181 06/07/99	Uni-ZAP XR	132	990	1	990	136	136	535	1	17	18	27
123	HFGAJ16	203960 04/26/99	Uni-ZAP XR	133	866	1	866	40	40	536	1	22	23	31
124	HFIHZ75	203960 04/26/99	pSport1	134	1280	454	1165	700	700	537	1	21	22	51
125	HFIJA29	203960 04/26/99	pSport1	135	1275	110	1275	175	175	538	1	27	28	82
126	HFIJA68	203979 04/29/99	pSport1	136	1157	1	1157	283	283	539	1	22	23	43
127	HFKE505	203960 04/26/99	Uni-ZAP XR	137	1885	1	1885	243	243	540	1	17	18	42
128	HFKEU12	203960 04/26/99	Uni-ZAP XR	138	1031	1	1031	6	6	541	1	16	17	55

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
129	HFKFX64	203960 04/26/99	Uni-ZAP XR	139	779	1	779	127	127	542	1			14
130	HFPDS07	203960 04/26/99	Uni-ZAP XR	140	3115	2302	3114	2546	2546	543	1	23	24	25
131	HFRAB10	203960 04/26/99	Uni-ZAP XR	141	1419	1	1419	203	203	544	1	27	28	45
132	HFTBM38	203960 04/26/99	Uni-ZAP XR	142	1941	322	1941	577	577	545	1	18	19	30
133	HFVGK35	203960 04/26/99	pBluescript	143	1236	1	1236		14	546	1			5
134	HFXBN86	PTA-181 06/07/99	Lambda ZAP II	144	1379	1	1379	149	149	547	1	25	26	65
135	HFXBT66	203960 04/26/99	Lambda ZAP II	145	1001	1	1001	172	172	548	1	15	16	26
136	HFXFZ46	203960 04/26/99	Lambda ZAP II	146	1378	1	1378	258	258	549	1			6
137	HGBER72	203960 04/26/99	Uni-ZAP XR	147	1316	1	1316	43	43	550	1	16	17	19
138	HGBEY14	203960 04/26/99	Uni-ZAP XR	148	1738	1	1738	233	233	551	1	18	19	39
139	HGBGN34	203960 04/26/99	Uni-ZAP XR	149	528	1	528		280	552	1	32	33	48
140	HGLBG15	203960 04/26/99	Uni-ZAP XR	150	778	1	778		191	553	1			26
141	HHEGS55	PTA-181 06/07/99	pCMVSPORT 3.0	151	594	2	594	159	159	554	1	16	17	36

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
142	HHEOW19	PTA-793 09/27/99	pCMVSPORT 3.0	152	1589	1	1589	183	183	555	1	18	19	64
143	HHFEC39	203960 04/26/99	Uni-ZAP XR	153	1302	1	1302		1211	556	1			1
144	HHFFF87	203960 04/26/99	Uni-ZAP XR	154	1547	1	1547	229	229	557	1			41
145	HHFFL34	203960 04/26/99	Uni-ZAP XR	155	2632	1	2632	42	42	558	1	21	22	223
146	HHFFS40	203960 04/26/99	Uni-ZAP XR	156	1816	1	1816	37	37	559	1	18	19	47
147	HHGCS78	203960 04/26/99	Lambda ZAP II	157	575	46	575	290	290	560	1	17	18	24
148	HHGDT26	203960 04/26/99	Lambda ZAP II	158	1584	1	1584	181	181	561	1			8
149	HHPFU28	203960 04/26/99	Uni-ZAP XR	159	1838	1	1838		156	562	1	18	19	27
150	HHSBI65	203917 04/08/99	Uni-ZAP XR	160	1444	1	1431	62	62	563	1	17	18	55
151	HHSDI53	PTA-181 06/07/99	Uni-ZAP XR	161	1277	1	1277	221	221	564	1	14	15	24
152	HHSFC09	203960 04/26/99	Uni-ZAP XR	162	531	1	531		380	565	1	10	11	32
153	HHSGL28	203960 04/26/99	Uni-ZAP XR	163	1093	1	1093	453	453	566	1			6
154	HISBA38	203957 04/26/99	pSPORT1	164	1058	1	1058	169	169	567	1	32	33	36

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
155	HJMAA03	203957 04/26/99	pCMVSPORT 3.0	165	665	1	665		527	568	1			9
156	HJMAV41	PTA-181 06/07/99	pCMVSPORT 3.0	166	1017	1	1017	207	207	569	1			27
157	HJMAV90	203959 04/26/99	pCMVSPORT 3.0	167	2886	2233	2886		2492	570	1	22	23	34
158	HJPBE39	203957 04/26/99	Uni-ZAP XR	168	1298	69	1298		170	571	1			18
159	HJPBK28	203957 04/26/99	Uni-ZAP XR	169	989	1	989		256	572	1	21	22	43
160	HJPCH08	203959 04/26/99	Uni-ZAP XR	170	879	1	879		374	573	1	10	11	117
161	HKABU43	203959 04/26/99	pCMVSPORT 2.0	171	1919	581	1919	755	755	574	1	20	21	281
162	HKACI79	PTA-181 06/07/99	pCMVSPORT 2.0	172	1181	1	1181	207	207	575	1	14	15	50
163	HKAFF50	203957 04/26/99	pCMVSPORT 2.0	173	1801	1	1801	343	343	576	1	13	14	50
164	HKGBF25	203957 04/26/99	pSPORT1	174	2007	1	2007	261	261	577	1	18	19	36
165	HKMLK03	203957 04/26/99	pBluescript	175	1049	1	1049	214	214	578	1			11
166	HKMLM95	203957 04/26/99	pBluescript	176	1098	1	1098		390	579	1			4
167	HLDBG17	PTA-181 06/07/99	pCMVSPORT 3.0	177	652	1	652	184	184	580	1	23	24	41



Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
168	HLDCA54	203979 04/29/99	pCMVSPORT 3.0	178	1815	425	1815	550	550	581	1	26	27	46
169	HLDQU79	203959 04/26/99	pCMVSPORT 3.0	179	1488	1	1488	99	99	582	1	23	24	348
169	HLDQU79	203959 04/26/99	pCMVSPORT 3.0	390	3179	163	1474	75	75	793	1	29	30	348
170	HLDRT09	203957 04/26/99	pCMVSPORT 3.0	180	721	254	665	522	522	583	1	20	21	66
171	HLHAP05	203957 04/26/99	Uni-ZAP XR	181	1842	12	1842	45	45	584	1			14
172	HLHCS23	203957 04/26/99	Uni-ZAP XR	182	1427	1	1427	25	25	585	1	24	25	34
173	HLIBO72	PTA-792 09/27/99	pCMVSPORT 1	183	1768	1	1768	167	167	586	1	46	47	127
174	HLICE88	203957 04/26/99	pCMVSPORT 1	184	840	401	824		708	587	1			2
175	HLICO10	203957 04/26/99	pCMVSPORT 1	185	903	1	903	441	441	588	1	23	24	72
176	HLJBS28	203957 04/26/99	pCMVSPORT 1	186	976	1	976	359	359	589	1			17
177	HLMBW89	203957 04/26/99	Lambda ZAP II	187	622	1	622	47	47	590	1	19	20	21
178	HLMGP50	203957 04/26/99	Lambda ZAP II	188	1063	1	1063	214	214	591	1			10
179	HLMJB64	203957 04/26/99	Lambda ZAP II	189	804	1	804	12	12	592	1	29	30	49

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
180	HLQAS12	PTA-793 09/27/99	Lambda ZAP II	190	2450	1	2450	305	305	593	1	11	12	12
181	HLQCL64	PTA-181 06/07/99	Lambda ZAP II	191	2385	1652	2385		3	594	1	1	2	182
182	HLWAV47	PTA-795 09/27/99	pCMVSPORT 3.0	192	2062	1	2062	200	200	595	1	29	30	32
183	HLWBB73	203957 04/26/99	pCMVSPORT 3.0	193	1716	1	1716	122	122	596	1	32	33	50
184	HLWCN37	203957 04/26/99	pCMVSPORT 3.0	194	788	1	788	81	81	597	1	40	41	43
185	HLYEU59	203957 04/26/99	pSport1	195	1146	1	1146	258	258	598	1	24	25	43
186	HLYGB19	203959 04/26/99	pSport1	196	2967	1527	2966	1863	1863	599	1			14
187	HLYGE16	203957 04/26/99	pSport1	197	752	1	752	406	406	600	1	17	18	73
188	HLYGY91	203957 04/26/99	pSport1	198	640	1	640	211	211	601	1	20	21	42
189	HMC6H60	203957 04/26/99	Uni-ZAP XR	199	443	1	443	211	211	602	1	17	18	48
190	HMDAB29	203957 04/26/99	Uni-ZAP XR	200	1190	1	1190	97	97	603	1	17	18	26
191	HMDAD44	203957 04/26/99	Uni-ZAP XR	201	1204	1	1204	135	135	604	1			8
192	HMEBB82	203957 04/26/99	Lambda ZAP II	202	2641	1	2641	30	30	605	1	19	20	34

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
193	HMEDE24	203957 04/26/99	Lambda ZAP II	203	2836	884	2806	900	900	606	1	16	17	33
194	HMELM75	203957 04/26/99	Lambda ZAP II	204	1607	1	1607	113	113	607	1	18	19	93
195	HMIK10	203957 04/26/99	Uni-ZAP XR	205	1064	1	1064	195	195	608	1	22	23	31
196	HMIBD93	203957 04/26/99	Uni-ZAP XR	206	1323	734	1323		983	609	1	27	28	65
197	HMIBF07	203957 04/26/99	Uni-ZAP XR	207	1738	1	1738	229	229	610	1			6
198	HMICP65	203979 04/26/99	Uni-ZAP XR	208	2048	1	2048	249	249	611	1	16	17	30
199	HMJAK70	203957 04/26/99	pSport1	209	799	1	799	273	273	612	1			10
200	HMSBE04	203957 04/26/99	Uni-ZAP XR	210	1396	1	1396	295	295	613	1			27
201	HMSCL38	203957 04/26/99	Uni-ZAP XR	211	2945	1	2945	120	120	614	1	25	26	35
202	HMSCR69	203959 04/26/99	Uni-ZAP XR	212	1667	442	1667	107	107	615	1	1	2	381
203	HMSHU20	203979 04/29/99	Uni-ZAP XR	213	2249	1	2249	50	50	616	1	24	25	113
204	HMSHY25	PTA-793 09/27/99	Uni-ZAP XR	214	2205	1	2205		656	617	1	11	12	35
205	HMTAB77	203979 04/29/99	pCMVSPORT 3.0	215	3839	1	3839	769	769	618	1	24	25	48

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
206	HMUAE26	203957 04/26/99	pCMVSPORT 3.0	216	2000	660	2000	710	710	619	1	20	21	30
207	HMVDU15	203979 04/29/99	pSport1	217	1351	1	1351	274	274	620	1	21	22	25
208	HMWJF53	203957 04/26/99	Uni-ZAP XR	218	2288	927	2101	1015	1015	621	1	30	31	38
209	HNEAK81	203957 04/26/99	Uni-ZAP XR	219	1224	1	1224	288	288	622	1	21	22	23
210	HNECL22	203957 04/26/99	Uni-ZAP XR	220	2710	225	2710	472	472	623	1	23	24	34
211	HNECW49	203957 04/26/99	Uni-ZAP XR	221	489	1	463	316	316	624	1	20	21	58
212	HNEDH88	203957 04/26/99	Uni-ZAP XR	222	2073	1	2073	70	70	625	1	19	20	33
213	HNFAC50	203957 04/26/99	Uni-ZAP XR	223	1442	428	1442	676	676	626	1	22	23	32
214	HNHFH34	203957 04/26/99	Uni-ZAP XR	224	728	1	728	178	178	627	1	20	21	30
215	HNGAM58	203957 04/26/99	Uni-ZAP XR	225	1156	1	1156		68	628	1	27	28	114
216	HNGBH53	203957 04/26/99	Uni-ZAP XR	226	636	1	636		47	629	1	17	18	46
217	HNGDQ38	203957 04/26/99	Uni-ZAP XR	227	1045	1	1045		205	630	1	22	23	59
218	HNGDX18	PTA-181 06/07/99	Uni-ZAP XR	228	1425	1	1425	237	237	631	1	30	31	243

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
218	HNGDX18	PTA-181 06/07/99	Uni-ZAP XR	391	1411	1	1411	231	231	794	1	18	19	132
219	HNGDY34	203957 04/26/99	Uni-ZAP XR	229	1002	1	1002		73	632	1			17
220	HNGEA34	203957 04/26/99	Uni-ZAP XR	230	1103	1	1103		58	633	1	24	25	44
221	HNGGA68	203957 04/26/99	Uni-ZAP XR	231	585	1	585	184	184	634	1			32
222	HNGIV64	203957 04/26/99	Uni-ZAP XR	232	1047	1	1047		221	635	1			8
223	HNGJB41	PTA-181 06/07/99	Uni-ZAP XR	233	1246	1	1246	252	252	636	1	46	47	73
224	HNGKT41	203959 04/26/99	Uni-ZAP XR	234	1048	1	1048	415	415	637	1	17	18	45
225	HNGNK44	203959 04/26/99	Uni-ZAP XR	235	1178	302	1178	611	611	638	1	18	19	74
226	HNGNO53	203959 04/26/99	Uni-ZAP XR	236	825	1	825	467	467	639	1	15	16	34
227	HNGPI25	203959 04/26/99	Uni-ZAP XR	237	853	129	853	544	544	640	1	20	21	25
228	HNHCT47	203959 04/26/99	Uni-ZAP XR	238	621	12	621	73	73	641	1	20	21	39
229	HNHFE71	203959 04/26/99	Uni-ZAP XR	239	903	1	903	598	598	642	1			21
230	HNHGK22	203918 04/08/99	Uni-ZAP XR	240	909	1	909	239	239	643	1	26	27	64

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
231	HNHHB10	203959 04/26/99	Uni-ZAP XR	241	901	1	901	215	215	644	1	28	29	59
232	HNHKI74	203959 04/26/99	Uni-ZAP XR	242	817	1	817	127	127	645	1			10
233	HNTBT17	PTA-181 06/07/99	pCMVSPORT 3.0	243	1959	1	1959	91	91	646	1			6
234	HNTMH79	203959 04/26/99	pSport1	244	922	1	922	48	48	647	1	35	36	38
235	HODAG07	203918 04/08/99	Uni-ZAP XR	245	900	1	900	43	43	648	1	35	36	43
236	HODBB70	203918 04/08/99	Uni-ZAP XR	246	604	1	604		173	649	1	7	8	27
237	HODBV05	203917 04/08/99	Uni-ZAP XR	247	1119	1	1117	101	101	650	1	17	18	33
238	HODCZ32	203959 04/26/99	Uni-ZAP XR	248	927	1	927		248	651	1			10
239	HOFNU55	PTA-795 09/27/99	pCMVSPORT 2.0	249	1365	1	1349	230	230	652	1	28	29	51
240	HOGBF01	203918 04/08/99	pCMVSPORT 2.0	250	1478	1	1478	309	309	653	1	10	11	20
241	HORBS82	203959 04/26/99	Uni-ZAP XR	251	1125	1	1125		21	654	1	19	20	39
242	HORBV76	203959 04/26/99	Uni-ZAP XR	252	1157	1	1157	183	183	655	1	25	26	198
243	HOSEC25	203959 04/26/99	Uni-ZAP XR	253	1552	1	1552	17	17	656	1	18	19	24

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
244	HOSEI81	203918 04/08/99	Uni-ZAP XR	254	897	1	897	203	203	657	1	22	23	83
245	HOSEJ94	203979 04/29/99	Uni-ZAP XR	255	1767	622	1750	848	848	658	1	21	22	28
246	HOUCA21	203918 04/08/99	Uni-ZAP XR	256	1129	1	1129	200	200	659	1	27	28	33
247	HOUDE92	203918 04/08/99	Uni-ZAP XR	257	1284	1	1282		70	660	1	6	7	88
248	HOUED72	PTA-181 06/07/99	Uni-ZAP XR	258	833	76	799		144	661	1			11
249	HOUFS04	203959 04/26/99	Uni-ZAP XR	259	2927	457	2882	520	520	662	1	42	43	72
250	HOUHI25	PTA-793 09/27/99	Uni-ZAP XR	260	1249	45	1102	188	188	663	1			20
251	HOVBD85	203918 04/08/99	pSport1	261	1129	1	1129	252	252	664	1	19	20	26
252	HPCAL26	203917 04/08/99	Uni-ZAP XR	262	3097	803	3097	1021	1021	665	1	23	24	30
253	HPEBA84	203959 04/26/99	Uni-ZAP XR	263	1160	250	1160	533	533	666	1	21	22	36
254	HPFBA54	203959 04/26/99	Uni-ZAP XR	264	835	1	835	258	258	667	1	39	40	45
255	HPFCI36	PTA-181 06/07/99	Uni-ZAP XR	265	879	1	879	94	94	668	1	17	18	19
256	HPJBU43	PTA-181 06/07/99	Uni-ZAP XR	266	575	1	575		242	669	1			17

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
257	HPMBX22	203959 04/26/99	Uni-ZAP XR	267	454	1	454		211	670	1			19
258	HPMCJ84	203918 04/08/99	Uni-ZAP XR	268	788	1	788	83	83	671	1	22	23	38
259	HPMCV30	203918 04/08/99	Uni-ZAP XR	269	908	1	908	52	52	672	1	27	28	47
260	HPMFH77	203918 04/08/99	Uni-ZAP XR	270	1891	1	1891		251	673	1	11	12	35
261	HPQCC53	203918 04/08/99	Lambda ZAP II	271	434	1	434	16	16	674	1	33	34	35
262	HPTRM02	203959 04/26/99	pBluescript	272	1760	658	1680	885	885	675	1	16	17	80
263	HPWBA29	203918 04/08/99	Uni-ZAP XR	273	325	1	325	194	194	676	1			13
264	HPWDK06	203959 04/26/99	Uni-ZAP XR	274	878	240	854	405	405	677	1			26
265	HRADA42	203959 04/26/99	pCMVSPORT 3.0	275	1135	1	1135		122	678	1	24	25	44
266	HRADF49	PTA-181 06/07/99	pCMVSPORT 3.0	276	2704	1	2684	169	169	679	1	39	40	253
267	HRADN25	203959 04/26/99	pCMVSPORT 3.0	277	1225	17	1206	198	198	680	1	17	18	65
268	HRADT25	203959 04/26/99	pCMVSPORT 3.0	278	1324	1	1324	233	233	681	1	28	29	63
269	HRDAI17	203918 04/08/99	Uni-ZAP XR	279	1500	547	1500	578	578	682	1	27	28	31



Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
270	HRDDQ39	203959 04/26/99	Uni-ZAP XR	280	776	1	773		215	683	1	17	18	46
271	HRDER22	203959 04/26/99	Uni-ZAP XR	281	543	1	543		32	684	1			9
272	HRDFK37	203959 04/26/99	Uni-ZAP XR	282	728	1	726	120	120	685	1			10
273	HRGBD54	203959 04/26/99	Uni-ZAP XR	283	2301	1687	2271		1958	686	1			10
274	HSAVA08	203918 04/08/99	Uni-ZAP XR	284	1061	1	1061		66	687	1	17	18	26
275	HSAWN53	203959 04/26/99	Uni-ZAP XR	285	349	1	349		159	688	1	29	30	63
276	HSAWZ40	203959 04/26/99	Uni-ZAP XR	286	1019	1	1019	124	124	689	1			37
277	HSDZM54	203959 04/26/99	pBluescript	287	554	1	554	445	445	690	1	15	16	36
278	HSHAX04	203959 04/26/99	Uni-ZAP XR	288	1287	494	1285		42	691	1	6	7	57
279	HSHBF76	203959 04/26/99	Uni-ZAP XR	289	1273	1	1213		129	692	1	7	8	10
280	HSKDR27	203918 04/08/99	Uni-ZAP XR	290	762	1	762		473	693	1	11	12	27
281	HSLHG78	203979 04/29/99	Uni-ZAP XR	291	1474	452	1474	647	647	694	1	20	21	70
282	HSLHX15	203959 04/26/99	Uni-ZAP XR	292	655	1	655	485	485	695	1	20	21	41

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
283	HSNAP85	203959 04/26/99	Uni-ZAP XR	293	1286	735	1286	941	696	1			4
284	HSNAZ09	203918 04/08/99	Uni-ZAP XR	294	626	1	626	164	697	1			14
285	HSOAH16	203959 04/26/99	Uni-ZAP XR	295	721	1	721	206	698	1	11	12	42
286	HSQBF66	203918 04/08/99	Uni-ZAP XR	296	1024	1	1024	229	699	1	28	29	66
287	HSQES57	203959 04/26/99	Uni-ZAP XR	297	1445	1012	1428	195	700	1	14	15	265
288	HSRBE06	PTA-791 09/27/99	Uni-ZAP XR	298	1633	13	1633	128	701	1			21
289	HSRFD18	203959 04/26/99	Uni-ZAP XR	299	1889	1	1793	67	702	1	20	21	28
290	HSSDI26	203918 04/08/99	Uni-ZAP XR	300	1406	1	1406	253	703	1			21
291	HSSEA64	PTA-181 06/07/99	Uni-ZAP XR	301	1282	1	1274	58	704	1	16	17	62
292	HSSEF77	203959 04/26/99	Uni-ZAP XR	302	1053	1	1053	184	705	1	25	26	60
293	HSSFE38	203959 04/26/99	Uni-ZAP XR	303	1238	85	1133	264	706	1	19	20	125
294	HSSGJ58	203918 04/08/99	Uni-ZAP XR	304	1954	1	1954	245	707	1	17	18	38
295	HSWBE76	203959 04/26/99	pCMVSPORT 3.0	305	874	250	710	380	708	1	34	35	59

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
296	HSXCP38	PTA-795 09/27/99	Uni-ZAP XR	306	2206	1	2206		211	709	1			14
297	HSYBI06	203918 04/08/99	pCMVSPORT 3.0	307	956	1	956	232	232	710	1	21	22	33
298	HT3BF49	203959 04/26/99	Uni-ZAP XR	308	2174	1	2174		306	711	1			4
299	HT5GR59	203959 04/26/99	Uni-ZAP XR	309	1743	1	1743	135	135	712	1	23	24	31
300	HTAEI78	203918 04/08/99	Uni-ZAP XR	310	1623	1	1623	632	632	713	1			4
301	HTDAA78	203918 04/08/99	pSPORT1	311	825	1	825	151	151	714	1			20
302	HTECB02	203959 04/26/99	Uni-ZAP XR	312	1662	106	1662	196	196	715	1	22	23	56
303	HTEDF18	203959 04/26/99	Uni-ZAP XR	313	829	1	829	325	325	716	1			5
304	HTEDI28	203959 04/26/99	Uni-ZAP XR	314	1247	1	1247		287	717	1	18	19	45
305	HTEEW69	203959 04/26/99	Uni-ZAP XR	315	1282	110	1263	182	182	718	1	30	31	323
306	HTEGS07	203959 04/26/99	Uni-ZAP XR	316	806	1	806		493	719	1	20	21	37
307	HTEGS11	PTA-181 06/07/99	Uni-ZAP XR	317	981	1	981		173	720	1			7
308	HTEHU59	203959 04/26/99	Uni-ZAP XR	318	1523	1	1504	170	170	721	1	19	20	34

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
309	HTEKM46	PTA-181 06/07/99	Uni-ZAP XR	319	2116	1	2116	171	171	722	1	24	25	38
310	HTEMQ17	203959 04/26/99	Uni-ZAP XR	320	1768	1	1768	446	446	723	1			12
311	HTGBK95	203959 04/26/99	Uni-ZAP XR	321	1131	1	1131	271	271	724	1	12	13	16
312	HTLAP64	203918 04/08/99	Uni-ZAP XR	322	1092	1	1092	173	173	725	1	19	20	20
313	HTLBT80	203959 04/26/99	Uni-ZAP XR	323	2101	817	1881	912	912	726	1	27	28	129
314	HTLDA84	203918 04/08/99	Uni-ZAP XR	324	1444	1	1444		225	727	1			13
315	HTLDN29	203959 04/26/99	Uni-ZAP XR	325	1374	1	1348	175	175	728	1	23	24	33
316	HTLDU78	203918 04/08/99	Uni-ZAP XR	326	1318	1	1318	219	219	729	1			8
317	HTLEC82	203959 04/26/99	Uni-ZAP XR	327	1260	217	1119	530	530	730	1	34	35	36
318	HTLEM16	203959 04/26/99	Uni-ZAP XR	328	1915	1158	1755	1220	1220	731	1	27	28	69
319	HTLEV48	203918 04/08/99	Uni-ZAP XR	329	1070	1	1070	205	205	732	1	30	31	207
319	HTLEV48	203918 04/08/99	Uni-ZAP XR	392	1065	1	1065	91	91	795	1			9
320	HTLFI73	203979 04/29/99	Uni-ZAP XR	330	1159	1	1159	340	340	733	1			23

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
321	HTNAM63	203918 04/08/99	pBluescript SK-	331	1006	1	1006		193	734	1	15	16	30
322	HTNBK13	203959 04/26/99	pBluescript SK-	332	1160	295	1148	534	534	735	1	16	17	21
323	HTOAI50	203959 04/26/99	Uni-ZAP XR	333	1258	1	1258	61	61	736	1	17	18	27
324	HTOAM11	203918 04/08/99	Uni-ZAP XR	334	1200	1	1200	89	89	737	1	24	25	34
325	HTODH57	203918 04/08/99	Uni-ZAP XR	335	1652	1	1652		228	738	1	18	19	71
326	HTODH83	203918 04/08/99	Uni-ZAP XR	336	1981	1	1981	103	103	739	1	21	22	32
327	HTODN35	203918 04/08/99	Uni-ZAP XR	337	1594	1	1594	67	67	740	1			14
328	HTOEV16	PTA-181 06/07/99	Uni-ZAP XR	338	1640	1	1640	201	201	741	1	39	40	118
329	HTOGR38	203959 04/26/99	Uni-ZAP XR	339	776	138	776		314	742	1	23	24	42
330	HTOHQ05	PTA-181 06/07/99	Uni-ZAP XR	340	1860	1	1860	198	198	743	1	19	20	54
331	HTPDU17	203959 04/26/99	Uni-ZAP XR	341	2078	1	2078		52	744	1	17	18	33
332	HTSFJ32	203918 04/08/99	pBluescript	342	1257	517	1257	93	93	745	1			18
333	HTTDN24	203959 04/26/99	Uni-ZAP XR	343	1992	856	1992		1024	746	1	13	14	234

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
334	HTTEE41	203959 04/26/99	Uni-ZAP XR	344	1973	864	1968		1171	747	1			8
335	HTXBD09	203959 04/26/99	Uni-ZAP XR	345	1921	22	1900		350	748	1			12
336	HTXDB22	PTA-181 06/07/99	Uni-ZAP XR	346	1211	1	1135		229	749	1	10	11	22
337	HTXDC38	203959 04/26/99	Uni-ZAP XR	347	820	106	806	359	359	750	1			18
338	HTXDC77	203979 04/29/99	Uni-ZAP XR	348	1441	159	1400	65	65	751	1	18	19	151
339	HTXDD61	PTA-181 06/07/99	Uni-ZAP XR	349	1140	1	1140		49	752	1	17	18	132
340	HTXDG92	203959 04/26/99	Uni-ZAP XR	350	1162	1	1162		216	753	1	24	25	66
341	HTXET11	203918 04/08/99	Uni-ZAP XR	351	989	1	989	178	178	754	1	22	23	29
342	HTXJD85	203959 04/26/99	Uni-ZAP XR	352	1117	1	1117	211	211	755	1	16	17	31
343	HTXJY08	203959 04/26/99	Uni-ZAP XR	353	1187	12	1187	108	108	756	1			16
344	HTXMZ07	203959 04/26/99	Uni-ZAP XR	354	1652	189	1640	319	319	757	1	22	23	37
345	HUFCL31	203959 04/26/99	pSport1	355	1460	1	1460		287	758	1			26
346	HUKDF20	203918 04/08/99	Lambda ZAP II	356	1105	1	1105	214	214	759	1	20	21	33

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
347	HUKDY82	203918 04/08/99	Lambda ZAP II	357	1435	1	1435	187	187	760	1	17	18	32
348	HUSCJ14	PTA-1838 05/09/00	Lambda ZAP II	358	3342	1	3342	74	74	761	1	30	31	196
349	HUSGL67	203918 04/08/99	pSport1	359	1008	65	1008	350	350	762	1	21	22	47
350	HUSGU40	203959 04/26/99	pSport1	360	1054	1	1054		500	763	1	20	21	46
351	HUSIR18	203959 04/26/99	pSport1	361	876	1	876	83	83	764	1	16	17	22
352	HUVDJ48	203918 04/08/99	Uni-ZAP XR	362	1827	1	1827	196	196	765	1			5
353	HWAAI12	203959 04/26/99	pCMV Sport 3.0	363	3303	1	1838	223	223	766	1			29
354	HWBBQ70	203959 04/26/99	pCMV Sport 3.0	364	1948	1	1948	222	222	767	1	21	22	43
355	HWBBU75	203979 04/29/99	pCMV Sport 3.0	365	2731	623	2731	783	783	768	1	22	23	51
356	HWBCN36	203959 04/26/99	pCMV Sport 3.0	366	1008	1	1008	378	378	769	1	23	24	90
357	HWBDJ08	203959 04/26/99	pCMV Sport 3.0	367	2085	1	2085	253	253	770	1	29	30	50
358	HWBFX16	203959 04/26/99	pCMV Sport 3.0	368	1497	1	1497		267	771	1			3
359	HW DAG96	203959 04/26/99	pCMV Sport 3.0	369	1147	300	1147	866	866	772	1	18	19	32

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
360	HWDAJ01	203959 04/26/99	pCMVSPORT 3.0	370	781	1	781	288	288	773	1			24
361	HWHPB78	203959 04/26/99	pCMVSPORT 3.0	371	1346	1	1346	200	200	774	1	23	24	66
362	HWLBO67	203959 04/26/99	pSport1	372	536	1	536	42	42	775	1	28	29	39
363	HWLGP26	203959 04/26/99	pSport1	373	1898	1007	1835	1091	1091	776	1	23	24	71
364	HILCA24	203960 04/26/99	pBluescript SK-	374	1982	153	1982	191	191	777	1	29	30	327
364	HILCA24	203960 04/26/99	pBluescript SK-	393	1980	151	1976	189	189	796	1	29	30	327
365	HE2CA60	203960 04/26/99	Uni-ZAP XR	375	3034	1679	3034	1731	1731	778	1			7
365	HE2CA60	203960 04/26/99	Uni-ZAP XR	394	1663	308	1663	360	360	797	1			7
366	HPWTF23	203979 04/29/99	Uni-ZAP XR	376	2008	94	1994	283	283	779	1	29	30	130
366	HPWTF23	203979 04/29/99	Uni-ZAP XR	395	2008	94	1994	283	283	798	1	29	30	130
367	HLWAU42	203957 04/26/99	pCMVSPORT 3.0	377	947	1	947	220	220	780	1	17	18	57
367	HLWAU42	203957 04/26/99	pCMVSPORT 3.0	396	2495	1542	2488	1751	1751	799	1	17	18	57
368	HGCAC19	203960 04/26/99	pSport1	378	5061	23	1475		317	781	1			9



Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
368	HGCAC19	203960 04/26/99	pSport1	397	1771	21	1473		315	800	1			9
368	HGCAC19	203960 04/26/99	pSport1	398	1534	23	1534		317	801	1			9
369	HPQAX38	203979 04/26/99	Lambda ZAP II	379	1158	41	1158		295	782	1	10	11	16
369	HPQAX38	203979 04/29/99	Lambda ZAP II	399	1157	41	1157		295	802	1	10	11	16
370	HEQBJ01	203960 04/26/99	pCMVSPORT 3.0	380	2791	2346	2731	2603	2603	783	1			19
370	HEQBJ01	203960 04/26/99	pCMVSPORT 3.0	400	2791	2346	2731	2603	2603	803	1			19
370	HEQBJ01	203960 04/26/99	pCMVSPORT 3.0	401	669	1	662	505	505	804	1			19
371	HTOJL95	203959 04/26/99	Uni-ZAP XR	381	1947	1	1947	221	221	784	1	26	27	58
371	HTOJL95	203959 04/26/99	Uni-ZAP XR	402	1854	1	1818	134	134	805	1	26	27	58
372	HTLIF12	203959 04/26/99	Uni-ZAP XR	382	1081	142	1033	644	644	785	1	19	20	75
372	HTLIF12	203959 04/26/99	Uni-ZAP XR	403	1081	142	1033	644	644	806	1	19	20	75
372	HTLIF12	203959 04/26/99	Uni-ZAP XR	404	1081	142	1033	644	644	807	1	19	20	75
372	HTLIF12	203959 04/26/99	Uni-ZAP XR	405	1044	142	1033	644	644	808	1	19	20	75

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
372	HTLIF12	203959 04/26/99	Uni-ZAP XR	406	1081	142	1033	644	644	809	1	19	20	75
372	HTLIF12	203959 04/26/99	Uni-ZAP XR	407	1100	140	1100	642	642	810	1	19	20	75
373	HTEEF26	203959 04/26/99	Uni-ZAP XR	383	1273	45	984	262	262	786	1			7
373	HTEEF26	203959 04/26/99	Uni-ZAP XR	408	1015	45	984	262	262	811	1			7
374	HTEED26	203959 04/26/99	Uni-ZAP XR	384	2179	1	2179	261	261	787	1	19	20	32
374	HTEED26	203959 04/26/99	Uni-ZAP XR	409	2167	1	2159	259	259	812	1	19	20	32
375	HPJB151	203959 04/26/99	Uni-ZAP XR	385	2795	523	2422	716	716	788	1	14	15	69
375	HPJB151	203959 04/26/99	Uni-ZAP XR	410	2793	522	2421	715	715	813	1	14	15	69
376	HOABP31	203959 04/26/99	Uni-ZAP XR	386	929	1	892		148	789	1	19	20	124
376	HOABP31	203959 04/26/99	Uni-ZAP XR	411	927	1	890		148	814	1	19	20	123
377	HBJHT01	203917 04/08/99	Uni-ZAP XR	387	1251	1	1251	200	200	790	1	20	21	21
377	HBJHT01	203917 04/08/99	Uni-ZAP XR	412	1252	1	1252	193	193	815	1	21	22	47
378	HE8FC45	203979 04/29/99	Uni-ZAP XR	388	1887	1	1887	155	155	791	1	33	34	47

Gene No.	cDNA Clone ID	ATCC Deposit No. Z and Date	Vector	NT SEQ ID NO: X	Total NT Seq.	5' NT of Clone Seq.	3' NT of Clone Seq.	5' NT of Start Codon	5' NT of First AA of Signal Pep	AA SEQ ID NO: Y	First AA of Sig Pep	Last AA of Sig Pep	First AA of Secreted Portion	Last AA of ORF
378	HE8FC45	203979 04/29/99	Uni-ZAP XR	413	1887	1	1887	155	155	816	1	33	34	47
379	HTLIF11	203959 04/26/99	Uni-ZAP XR	389	1968	860	1968	933	933	793	1	33	34	38

### **Table 1B (Comprised of Tables 1B.1 and 1B.2)**

The first column in Table 1B.1 and Table 1B.2 provides the gene number in the application corresponding to the clone identifier. The second column in Table 1B.1 and Table 1B.2 provides a unique "Clone ID:" for the cDNA clone related to each contig sequence disclosed in Table 1B.1 and Table 1B.2. This clone ID references the cDNA clone which contains at least the 5' most sequence of the assembled contig and at least a portion of SEQ ID NO:X as determined by directly sequencing the referenced clone. The referenced clone may have more sequence than described in the sequence listing or the clone may have less. In the vast majority of cases, however, the clone is believed to encode a full-length polypeptide. In the case where a clone is not full-length, a full-length cDNA can be obtained by methods described elsewhere herein. The third column in Table 1B.1 and Table 1B.2 provides a unique "Contig ID" identification for each contig sequence. The fourth column in Table 1B.1 and Table 1B.2 provides the "SEQ ID NO:" identifier for each of the contig polynucleotide sequences disclosed in Table 1B.

#### **Table 1B.1**

The fifth column in Table 1B.1, "ORF (From-To)", provides the location (i.e., nucleotide position numbers) within the polynucleotide sequence "SEQ ID NO:X" that delineate the preferred open reading frame (ORF) shown in the sequence listing and referenced in Table 1B.1, column 6, as SEQ ID NO:Y. Where the nucleotide position number "To" is lower than the nucleotide position number "From", the preferred ORF is the reverse complement of the referenced polynucleotide sequence. The sixth column in Table 1B.1 provides the corresponding SEQ ID NO:Y for the polypeptide sequence encoded by the preferred ORF delineated in column 5. In one embodiment, the invention provides an amino acid sequence comprising, or alternatively consisting of, a polypeptide encoded by the portion of SEQ ID NO:X delineated by "ORF (From-To)". Also provided are polynucleotides encoding such amino acid sequences and the complementary strand thereto. Column 7 in Table 1B.1 lists residues comprising epitopes contained in the polypeptides encoded by the preferred ORF (SEQ ID NO:Y), as predicted using the algorithm of Jameson and Wolf, (1988) Comp. Appl. Biosci. 4:181-186. The Jameson-Wolf antigenic analysis was performed using the computer program PROTEAN (Version 3.11 for the Power MacIntosh, DNASTAR, Inc., 1228 South Park Street Madison, WI). In specific embodiments, polypeptides of the invention comprise, or alternatively consist of, at least one, two, three, four, five or more of the predicted epitopes as described in Table 1B. It will be appreciated that depending on the analytical criteria used to predict antigenic determinants, the exact address of the determinant may vary slightly. Column 8 of Table 1B.1 ("Tissue Distribution") is described below in Table 1B.2 Column 5. Column 9 of Table 1B.1 ("Cytologic Band") provides the chromosomal location of polynucleotides corresponding to SEQ ID NO:X. Chromosomal location

was determined by finding exact matches to EST and cDNA sequences contained in the NCBI (National Center for Biotechnology Information) UniGene database. Each sequence in the UniGene database is assigned to a "cluster"; all of the ESTs, cDNAs, and STSs in a cluster are believed to be derived from a single gene. Chromosomal mapping data is often available for one or more sequence(s) in a UniGene cluster; this data (if consistent) is then applied to the cluster as a whole. Thus, it is possible to infer the chromosomal location of a new polynucleotide sequence by determining its identity with a mapped UniGene cluster.

A modified version of the computer program BLASTN (Altshul, et al., J. Mol. Biol. 215:403-410 (1990), and Gish, and States, Nat. Genet. 3:266-272) (1993) was used to search the UniGene database for EST or cDNA sequences that contain exact or near-exact matches to a polynucleotide sequence of the invention (the 'Query'). A sequence from the UniGene database (the 'Subject') was said to be an exact match if it contained a segment of 50 nucleotides in length such that 48 of those nucleotides were in the same order as found in the Query sequence. If all of the matches that met this criteria were in the same UniGene cluster, and mapping data was available for this cluster, it is indicated in Table 1B under the heading "Cytologic Band". Where a cluster had been further localized to a distinct cytologic band, that band is disclosed; where no banding information was available, but the gene had been localized to a single chromosome, the chromosome is disclosed.

Once a presumptive chromosomal location was determined for a polynucleotide of the invention, an associated disease locus was identified by comparison with a database of diseases which have been experimentally associated with genetic loci. The database used was the Morbid Map, derived from OMIM™ and National Center for Biotechnology Information, National Library of Medicine (Bethesda, MD) 2000;. If the putative chromosomal location of a polynucleotide of the invention (Query sequence) was associated with a disease in the Morbid Map database, an OMIM reference identification number was noted in column 10, Table 1B.1, labelled "OMIM Disease Reference(s). Table 5 is a key to the OMIM reference identification numbers (column 1), and provides a description of the associated disease in Column 2.

#### **Table 1B.2**

Column 5, in Table 1B.2, provides an expression profile and library code:count for each of the contig sequences (SEQ ID NO:X) disclosed in Table 1B, which can routinely be combined with the information provided in Table 4 and used to determine the tissues, cells, and/or cell line libraries which predominantly express the polynucleotides of the invention. The first number in Table 1B.2, column 5 (preceding the colon), represents the tissue/cell source identifier code corresponding to the code and description provided in Table 4. The second number in column 5 (following the colon) represents the number of times a sequence corresponding to the

reference polynucleotide sequence was identified in the corresponding tissue/cell source. Those tissue/cell source identifier codes in which the first two letters are "AR" designate information generated using DNA array technology. Utilizing this technology, cDNAs were amplified by PCR and then transferred, in duplicate, onto the array. Gene expression was assayed through hybridization of first strand cDNA probes to the DNA array. cDNA probes were generated from total RNA extracted from a variety of different tissues and cell lines. Probe synthesis was performed in the presence of  $^{33}\text{P}$  dCTP, using oligo (dT) to prime reverse transcription. After hybridization, high stringency washing conditions were employed to remove non-specific hybrids from the array. The remaining signal, emanating from each gene target, was measured using a Phosphorimager. Gene expression was reported as Phosphor Stimulating Luminescence (PSL) which reflects the level of phosphor signal generated from the probe hybridized to each of the gene targets represented on the array. A local background signal subtraction was performed before the total signal generated from each array was used to normalize gene expression between the different hybridizations. The value presented after "[array code]:" represents the mean of the duplicate values, following background subtraction and probe normalization. One of skill in the art could routinely use this information to identify normal and/or diseased tissue(s) which show a predominant expression pattern of the corresponding polynucleotide of the invention or to identify polynucleotides which show predominant and/or specific tissue and/or cell expression.

TABLE 1B.1

Gene No:	cDNA Clone ID	Contig ID:	SEQ ID NO: X	ORF (From-To)	AA SEQ ID NO: Y	Predicted Epitopes	Tissue Distribution Library code: count (see Table IV for Library Codes)	Cytologic Band	OMIM Disease Reference(s):
1	H6BSF56	762968	11	83 - 508	415	Asn-131 to Met-140.	L0599: 4, L0439: 3, L0777: 3, H0253: 2, H0615: 2, H0520: 2, L0754: 2, L0745: 2, L0759: 2, H0556: 1, H0657: 1, S0116: 1, H0450: 1, S0418: 1, S0046: 1, S0222: 1, H0492: 1, S0049: 1, H0570: 1, H0123: 1, H0050: 1, H0051: 1, S0036: 1, H0494: 1, L0805: 1, L0776: 1, S0126: 1, H0435: 1, H0670: 1, S0028: 1, L0747: 1, S0026: 1 and H0542: 1.	1, 15, 18, 3, 4	
2	H6EEC72	889401	12	263 - 319	416		S0444: 2, S0410: 2, H0559: 2, H0575: 2, H0618: 2, H0050: 2, H0521: 2, H0295: 1, H0650: 1, H0255: 1, S0418: 1, S0358: 1, S0376: 1, H0580: 1, S0045: 1, S0046: 1, H0550: 1, H0610: 1,	19	

									H0497: 1, H0069: 1, H0635: 1, H0546: 1, H0086: 1, H0009: 1, H0059: 1, H0100: 1, H0429: 1, H0494: 1, L0766: 1, L0665: 1, H0519: 1, H0711: 1, S0152: 1, H0555: 1, L0743: 1, L0748: 1, L0747: 1, L0759: 1, S0192: 1, H0422: 1 and H0506: 1.			
3	HACAB68	584773	13	135 - 371	417	Leu-6 to Ser-12.			L0748: 4, H0457: 3 and S6022: 1.	L,X		
4	HACBS22	847113	14	217 - 342	418	Cys-2 to Leu-8.			L0439: 9, L0751: 7, L0766: 6, L0361: 6, H0052: 5, S0002: 5, L0769: 5, L0777: 5, L0770: 4, L0771: 4, L0748: 4, L0754: 4, L0758: 4, L0759: 4, L0596: 4, S0474: 3, S0051: 3, S0142: 3, L0662: 3, L0747: 3, H0170: 2, H0580: 2, S0046: 2, H0619: 2, L0717: 2, H0550: 2, S0280: 2, H0039: 2, S0422: 2, L0794: 2, L0775: 2, L0805: 2, L0655: 2, L5623: 2, L0666: 2, L0665: 2,	2		





									L3824: 1, S0126: 1, H0689: 1, H0658: 1, H0754: 1, S0174: 1, S0406: 1, L0743: 1, S0031: 1, S0436: 1, H0668: 1, L3378: 1 and H0506: 1.			
5	HACBT91	789939	15	329 - 508	419	Ser-49 to Lys-59.			L0665: 5, L0743: 3, H0341: 2, L0761: 2, L0756: 2, S0356: 1, H0734: 1, S0280: 1, T0048: 1, H0271: 1, S0440: 1, H0641: 1, H0646: 1, L0770: 1, L0637: 1, L0800: 1, L0773: 1, L0648: 1, L0662: 1, L0768: 1, L0766: 1, L0649: 1, L0375: 1, L0784: 1, L0806: 1, L0655: 1, L0809: 1, H0672: 1, S0406: 1, L0747: 1, L0749: 1 and L0750: 1.			
6	HADDE71	839187	16	250 - 666	420	Pro-9 to Thr-14, Ser-37 to Trp-44, Gly-79 to Thr-85, Arg-88 to Lys-139.			L0769: 11, L0747: 9, L0809: 6, S0408: 4, L0770: 4, L0439: 4, L0752: 4, L0759: 4, L0766: 3, L0803: 3, L0666: 3, L0751: 3, L0780: 3, S0007: 2, H0619: 2, H0351: 2, H0333: 2, H0427: 2,			



									L0744: 1, L0749: 1, L0786: 1, L0753: 1, L0755: 1, L0731: 1, L0758: 1, S0436: 1, S0011: 1 and S0192: 1.			
7	HADDJ13	827273	17	347 - 439	421				H0427: 1			
8	HADMA77	783049	18	992 - 1063	422				L0439: 15, S0222: 4, L0157: 4, L0769: 4, L0438: 3, L0745: 3, L0731: 3, L0758: 3, L0599: 3, H0443: 2, H0441: 2, S0010: 2, L0662: 2, L0744: 2, L0748: 2, L0750: 2, L0756: 2, L0777: 2, H0583: 1, L0005: 1, S0354: 1, H0675: 1, S0408: 1, H0619: 1, H0369: 1, H0574: 1, H0486: 1, H0390: 1, S0346: 1, H0309: 1, H0597: 1, T0003: 1, H0024: 1, S6028: 1, H0028: 1, T0006: 1, H0628: 1, H0135: 1, H0551: 1, S0438: 1, L0520: 1, L0768: 1, L0776: 1, L0559: 1, L0659: 1, L0384: 1, L0809: 1, H0144: 1, H0547: 1, L0746: 1, L0747: 1, L0757: 1 and	3		

9	HADMB15	847116	19	238 - 300	423		S0434: 1. L0595: 2, L0442: 1, L0005: 1, L3653: 1, H0390: 1, H0081: 1, H0024: 1, L0770: 1, L5566: 1, L0651: 1, L0565: 1, L0439: 1, L0747: 1, L0752: 1, H0445: 1, L0592: 1 and L0599: 1.	7	
10	HAGBQ12	722205	20	171 - 236	424		L0754: 4, L0805: 2, L0777: 2, L0755: 2, S0010: 1, H0049: 1, L0163: 1, L0771: 1, L0775: 1 and L0776: 1.		
11	HAGCC87	638587	21	509 - 538	425		L0439: 4, L0519: 3, S0010: 2, T0010: 1, L0809: 1, H0682: 1, S0404: 1, S0406: 1, H0436: 1 and L0756: 1.		
12	HAGDW20	637489	22	238 - 291	426		S0010: 1 and H0616: 1.	16	
13	HAGEG10	823543	23	146 - 313	427		L0766: 17, L0663: 5, H0486: 3, L0439: 3, L0747: 3, L0750: 3, L0779: 3, L0592: 3, H0624: 2, H0747: 2, S0250: 2, L0769: 2, L0662: 2, L0768: 2, L0805: 2, L0527: 2, L0647: 2, L0789: 2, L0792: 2, L0666: 2, L0749: 2, L0777: 2,		



15	HAGFS57	847120	25	241 - 405	429	Met-1 to Lys-6.	L0438: 2, L0439: 2, L0745: 2, L0747: 2, S0436: 2, S0408: 1, T0082: 1, S0010: 1, H0052: 1, T0010: 1, H0598: 1, L0770: 1, L0774: 1, L0783: 1, L0788: 1, L0665: 1, L0742: 1, L0777: 1, L0753: 1, L0755: 1, L0759: 1 and L0592: 1.	15		
							L0438: 6, L0439: 4, S0360: 3, S0422: 3, H0547: 3, L0747: 3, L0005: 2, S0222: 2, S0002: 2, L0664: 2, L0754: 2, S0434: 2, H0506: 2, H0170: 1, H0171: 1, S0116: 1, S0212: 1, H0580: 1, H0749: 1, H0455: 1, L3655: 1, H0069: 1, H0098: 1, S0010: 1, L0105: 1, H0581: 1, H0263: 1, H0009: 1, L0471: 1, H0099: 1, S0003: 1, H0039: 1, S0036: 1, H0090: 1, H0591: 1, S0426: 1, L0794: 1, L0776: 1, L5622: 1, S0052: 1, H0144: 1, H0682: 1,			

16	HAGHN57	773286	26	900 - 932	430		H0659: 1, H0521: 1, H0555: 1, L0756: 1, H0445: 1 and S0452: 1.  H0521: 5, L0777: 5, S0376: 4, H0733: 3, H0156: 3, H0519: 3, H0436: 3, L0731: 3, H0656: 2, H0580: 2, H0747: 2, L3816: 2, H0036: 2, L0471: 2, H0090: 2, H0040: 2, H0551: 2, H0494: 2, S0438: 2, S0440: 2, H0529: 2, L0809: 2, H0144: 2, S0374: 2, H0593: 2, H0170: 1, L3643: 1, H0583: 1, H0650: 1, S0418: 1, S0358: 1, S0444: 1, L3645: 1, H0741: 1, H0734: 1, S0045: 1, S0476: 1, H0619: 1, H0586: 1, H0643: 1, H0632: 1, H0486: 1, S0280: 1, H0590: 1, S0010: 1, S0346: 1, H0581: 1, H0231: 1, H0046: 1, H0123: 1, S6028: 1, H0687: 1, S0003: 1, S0214: 1, H0252: 1, H0615: 1, H0212: 1, L0455: 1,				
----	---------	--------	----	-----------	-----	--	---	--	--	--	--



								S0366: 1, H0163: 1, H0038: 1, H0634: 1, T0067: 1, L0475: 1, H0560: 1, H0561: 1, S0464: 1, H0646: 1, S0426: 1, H0026: 1, L0790: 1, H0520: 1, H0435: 1, S0328: 1, H0539: 1, H0704: 1, S0027: 1, L0439: 1, L0750: 1, L0756: 1, L0757: 1, S0434: 1, L0581: 1, L0595: 1, H0543: 1 and H0423: 1.			
17	HAGHR18	655435	27	28 - 126	431			L0717: 1 and S0346: 1.	8		
18	HAHEA15	847013	28	196 - 237	432			L0766: 3, H0599: 2, L0750: 2, L0753: 2, L3816: 1, L0775: 1, L0809: 1, L0789: 1, L0754: 1, L0755: 1 and L0759: 1.			
19	HAAJAA47	534670	29	192 - 308	433		Leu-33 to Asp-38.	H0560: 1, H0561: 1 and H0542: 1.			
20	HAAJAY92	845601	30	12 - 296	434		Lys-89 to Glu-94.	H0561: 1 and L0758: 1.	9		
21	HAOAG15	852204	31	8 - 3511	435		Asp-26 to Leu-32, Trp-62 to Asp-72, Gln-95 to His-101, Thr-158 to Thr-164, Phe-222 to Glu-227, Asn-234 to Thr-245, Gly-256 to Glu-266, Gly-277 to Glu-283,	L0759: 3, S0314: 2, L0744: 2, L0756: 2, L0755: 2, S0046: 1, H0391: 1, H0052: 1, H0050: 1, S0318: 1, S0338: 1, S0312: 1, L0766: 1 and H0144: 1.			

						Arg-310 to Ser-317, Ser-327 to Phe-333, Ser-360 to Ser-366.						
22	HAQAI92	688037	32	250 - 321	436					H0617: 5, H0606: 2, L0744: 2, L0779: 2, H0295: 1, H0100: 1, S0440: 1, H0026: 1, L0762: 1, L0504: 1, L0769: 1, L0764: 1, L0662: 1, L0649: 1, L0804: 1, L0787: 1, L0666: 1, L0663: 1, H0520: 1, L0748: 1, L0751: 1, L0752: 1 and S0436: 1.	20,4	
23	HAQBG57	837545	33	170 - 340	437	Trp-10 to Lys-18, Val-32 to Cys-38, Asp-41 to Thr-47.				H0295: 6, H0255: 2, H0392: 1, H0587: 1, H0333: 1, H0545: 1, H0328: 1, H0616: 1, S0142: 1, H0529: 1, L0659: 1, L0783: 1, L0528: 1, H0547: 1, S0136: 1, S0390: 1, L0754: 1, L0747: 1 and L0752: 1.		
24	HAQCE11	633730	34	262 - 273	438					H0295: 5 and L0438: 1.		
25	HATBI94	839468	35	18 - 224	439	Lys-42 to Asp-54.				L0758: 9, L0769: 4, H0556: 3, L0756: 3, H0486: 2, H0156: 2, H0040: 2, H0529: 2, L0766: 2, L0803: 2, L0659: 2, L0809: 2,	1	

									L0565: 2, H0539: 2, L0748: 2, L0754: 2, L0777: 2, H0595: 2, L0595: 2, L0361: 2, S0114: 1, H0402: 1, S0358: 1, H0580: 1, L2255: 1, S0222: 1, H0587: 1, H0497: 1, L3655: 1, H0013: 1, H0427: 1, H0581: 1, H0251: 1, H0046: 1, H0009: 1, H0320: 1, H0594: 1, H0266: 1, H0031: 1, L0055: 1, H0376: 1, H0634: 1, S0038: 1, H0100: 1, L0667: 1, L0771: 1, L0804: 1, L0776: 1, L0547: 1, L5623: 1, L0790: 1, L0791: 1, L0793: 1, L0665: 1, H0144: 1, L3827: 1, H0519: 1, S0126: 1, H0682: 1, H0659: 1, H0521: 1, S0404: 1, L0740: 1, L0747: 1, L0759: 1, S0436: 1 and L0591: 1.				
26	HATCB45	631172	36	268 - 396	440				L0749: 3, H0156: 2, S0422: 2, L0804: 2, L0754: 2, L0362: 2, L3643: 1, H0341: 1,				

									L0021: 1, H0620: 1, L0529: 1, H0762: 1, H0670: 1, H0660: 1, L0748: 1, L0750: 1 and L0758: 1.			
27	HATICI03	580805	37	271 - 324	441	Lys-8 to Trp-13.			S6026: 1, H0156: 1 and S0426: 1.	13		
28	HATEH20	836056	38	93 - 221	442	Val-23 to Glu-28.			L0439: 14, L0740: 13, H0046: 10, H0556: 9, L0752: 9, H0052: 7, H0617: 7, L0748: 7, L0747: 7, L0758: 7, S0222: 6, L0809: 6, L0754: 6, S0049: 5, H0620: 5, L0769: 5, L0766: 5, L0663: 5, H0144: 5, L0438: 5, L0741: 5, L0731: 5, S0436: 5, H0657: 4, S0278: 4, H0599: 4, L0163: 4, H0266: 4, S0002: 4, L0771: 4, L0804: 4, L0659: 4, H0521: 4, L0742: 4, L0743: 4, L0751: 4, L0753: 4, L0759: 4, S0444: 3, H0728: 3, H0618: 3, S0010: 3, H0050: 3, L0471: 3, S0051: 3, T0010: 3, S6028: 3, H0551: 3, H0494: 3, S0144: 3,			











									H0135: 1, H0616: 1, H0059: 1, H0561: 1, S0344: 1, S0422: 1, L0763: 1, L0646: 1, L0521: 1, L0766: 1, L0649: 1, L0789: 1, L0663: 1, L0438: 1, L3811: 1, H0435: 1, S0406: 1, H0436: 1, L0612: 1, L0748: 1, L0751: 1, L0779: 1, L0731: 1, L0758: 1, L0759: 1, L0686: 1, L0595: 1, S0194: 1 and H0721: 1.			
	HBCJL35	897937	390	1033 - 1407	794	Pro-46 to Ala-57, Ser-74 to Glu-94, Gly-104 to Ser-110.						
31	HBGBC29	691473	41	1016 - 1024	445				L0731: 20, L0747: 7, L0794: 6, L0764: 4, L0803: 4, L0759: 4, L0662: 3, L0774: 3, L0749: 3, L0756: 3, S0436: 3, S0360: 2, H0156: 2, H0046: 2, H0181: 2, L0766: 2, L0659: 2, L0809: 2, L0438: 2, S0126: 2, H0658: 2, L0439: 2, L0754: 2, L0777: 2, L0755: 2, L0757: 2, L0604: 2, S0242: 2,			







									L0779: 1, L0731: 1, L0599: 1, H0543: 1 and H0423: 1.			
35	HBICW51	553630	45	289 - 417	449				L0766: 7, H0556: 5, S0002: 2, H0395: 1, S0418: 1, S0049: 1, H0052: 1, H0598: 1, H0591: 1, H0560: 1, L0803: 1, L0655: 1, H0478: 1, L0749: 1, L0758: 1, S0031: 1, H0444: 1 and H0543: 1.			
36	HBJAB02	837309	46	84 - 188	450	Arg-24 to Asp-31.			S0434: 5, L0794: 3, H0255: 2, H0318: 2, H0251: 2, L0764: 2, L0628: 2, L0809: 2, L0665: 2, H0658: 2, S0406: 2, L0361: 2, H0265: 1, H0685: 1, H0657: 1, H0483: 1, S0420: 1, S0442: 1, S0358: 1, H0729: 1, H0734: 1, S0132: 1, S0222: 1, T0082: 1, H0150: 1, H0083: 1, S0214: 1, H0252: 1, H0628: 1, T0041: 1, S0344: 1, H0529: 1, L0520: 1, L0535: 1, L0662: 1, L0387: 1, L0375: 1, L0518: 1, L0666: 1, L0663: 1,	17		





39	HBJDS79	813588	49	1032 - 1355	453	Met-1 to Gly-7.	L0769: 7, L0754: 7, L0777: 7, L0809: 4, L0751: 4, L0771: 3, L0776: 3, L0439: 3, S0408: 2, H0318: 2, L0163: 2, H0673: 2, H0038: 2, L0766: 2, H0539: 2, H0521: 2, S0406: 2, H0555: 2, L0748: 2, L0750: 2, L0756: 2, L0731: 2, H0739: 1, H0624: 1, H0171: 1, H0556: 1, H0685: 1, H0295: 1, H0294: 1, H0663: 1, S0442: 1, S0410: 1, H0580: 1, H0734: 1, H0747: 1, L0717: 1, S0222: 1, H0600: 1, H0574: 1, H0559: 1, H0069: 1, L0021: 1, S0010: 1, H0052: 1, L0040: 1, H0327: 1, H0150: 1, H0620: 1, H0024: 1, T0006: 1, H0644: 1, S0366: 1, H0135: 1, H0059: 1, L0351: 1, H0494: 1, S0438: 1, H0647: 1, H0529: 1, L0763: 1, L5565: 1, L0372: 1, L0644: 1, L0764: 1,		
----	---------	--------	----	-------------	-----	-----------------	--	--	--





41	HBJFK45	531919	51	430 - 456	455		H0318: 1 and L0766: 1.		
42	HBJKD16	853358	52	78 - 173	456		L0766: 9, L0439: 9, L0747: 6, L2528: 5, L0777: 5, H0673: 4, L0438: 4, L0758: 4, L0362: 4, S0116: 3, L0748: 3, L0752: 3, H0445: 3, H0156: 2, T0010: 2, H0615: 2, H0038: 2, H0616: 2, H0264: 2, H0646: 2, L0761: 2, L0776: 2, L0750: 2, L0779: 2, S0436: 2, L0593: 2, S0242: 2, H0222: 1, H0740: 1, H0657: 1, H0661: 1, H0663: 1, L2293: 1, H0589: 1, S0444: 1, H0340: 1, L3646: 1, H0580: 1, H0749: 1, H0393: 1, H0549: 1, S0222: 1, H0574: 1, H0486: 1, H0013: 1, H0069: 1, L0021: 1, S0010: 1, H0318: 1, S0474: 1, H0046: 1, L0471: 1, H0090: 1, L0638: 1, L0646: 1, L0764: 1, L0521: 1, L0364: 1, L0774: 1, L0659: 1, L0543: 1, L5622: 1,		

								L0792: 1, L0666: 1, L0664: 1, L0665: 1, S0428: 1, L2657: 1, L2652: 1, L3663: 1, L2262: 1, H0435: 1, L3832: 1, L0741: 1, L0749: 1, S0434: 1, L0588: 1, H0422: 1, L0698: 1 and L2359: 1.			
43	HBMBM96	561935	53	170 - 184	457			L0747: 2, H0392: 1, H0574: 1, H0421: 1, L0662: 1, L0666: 1, S0404: 1, L0744: 1 and H0543: 1.	11		
44	HBMBX01	705047	54	363 - 449	458			L0748: 5, H0318: 3, H0543: 3, H0484: 1, H0402: 1, S0474: 1, H0421: 1, H0052: 1, H0083: 1, H0266: 1, H0553: 1, H0272: 1, S0440: 1, S0142: 1, S0210: 1, S0002: 1, L0761: 1, L0766: 1, L0792: 1, H0520: 1, H0710: 1, L0747: 1, H0444: 1 and H0595: 1.	1		
45	HBMTX26	695704	55	107 - 376	459			S0116: 1 and T0042: 1.			
46	HBMUH74	866160	56	344 - 430	460			L0754: 3, L0777: 3, L0439: 2, S0116: 1, H0341: 1, H0661: 1, H0038: 1, H0412: 1, L0761: 1, L0667: 1,			

47	HBMWE61	778066	57	238 - 267	461				L0764: 1, L0788: 1, H0435: 1, L0749: 1, L0779: 1 and L0758: 1.	X				
48	HBNAX40	834801	58	2497 - 2646	462				S0116: 1 L0439: 11, H0171: 5, L0754: 5, L0748: 4, H0052: 3, L0662: 3, L0756: 3, L0755: 3, H0422: 3, S0360: 2, L0738: 2, H0032: 2, L0803: 2, L0655: 2, L0789: 2, L0605: 2, H0423: 2, H0638: 1, T0114: 1, H0156: 1, L0021: 1, S0010: 1, H0581: 1, H0046: 1, L0471: 1, H0014: 1, H0356: 1, H0188: 1, H0553: 1, H0591: 1, S0386: 1, T0042: 1, H0625: 1, H0641: 1, S0142: 1, L0598: 1, L0369: 1, L0640: 1, L0375: 1, L0654: 1, L0659: 1, L0783: 1, L0663: 1, L0665: 1, H0144: 1, L0352: 1, H0547: 1, H0648: 1, H0672: 1, H0555: 1, H0436: 1, L0749: 1, L0779: 1, L0731: 1, L0758: 1, L0759: 1,					

49	HBNBJ76	810332	59	1603 - 1809	463	Arg-59 to Ser-64.	H0445: 1, L0366: 1 and H0668: 1. H0052: 18, L0439: 13, L0766: 10, S0222: 8, L0751: 7, L0741: 6, H0188: 5, H0617: 5, L0438: 5, S0360: 4, L0764: 4, L0748: 4, L0740: 4, L0753: 4, H0265: 3, S0040: 3, S0356: 3, H0333: 3, H0013: 3, T0010: 3, H0622: 3, H0040: 3, L0666: 3, H0520: 3, H0547: 3, H0519: 3, L0747: 3, L0750: 3, L0759: 3, S0436: 3, H0556: 2, H0255: 2, H0664: 2, H0458: 2, L0005: 2, H0728: 2, H0549: 2, H0581: 2, H0309: 2, H0009: 2, H0178: 2, H0135: 2, H0090: 2, L0351: 2, H0494: 2, L0770: 2, L0662: 2, L0803: 2, L0665: 2, H0144: 2, L0565: 2, H0435: 2, H0696: 2, H0134: 2, H0626: 2, L0742: 2, L0754: 2, L0757: 2, S0011: 2, H0295: 1,	7		
----	---------	--------	----	-------------	-----	-------------------	--	---	--	--



									L3826: 1, H0658: 1, S0328: 1, S0152: 1, S3014: 1, S0028: 1, L0745: 1, L0756: 1, L0780: 1, S0260: 1, H0445: 1, L0591: 1, L0603: 1, S0196: 1, H0542: 1, H0423: 1, H0422: 1, L0600: 1 and H0352: 1.			
50	HBQAC57	793814	60	146 - 235	464				H0229: 1 and L0780: 1.			
51	HBSAK32	856387	61	447 - 590	465				L0790: 2, H0170: 1, 20 H0381: 1, S0001: 1, S0282: 1, L0021: 1, S0112: 1, L0640: 1, L0766: 1, L0774: 1, L0651: 1, L0517: 1, L0783: 1, L0809: 1, L0519: 1, L0743: 1, L0751: 1, L0747: 1, L0749: 1, L0750: 1, L0777: 1, L0755: 1, L0758: 1 and L0759: 1.			
52	HBXCM66	639039	62	119 - 169	466				H0550: 2, L0523: 2, 4 S0282: 1, S0045: 1, H0549: 1, H0052: 1 and S0038: 1.			
53	HBXCX15	637542	63	72 - 77	467				S0038: 3, H0438: 1, L0363: 1 and S0053: 1.			
54	HCDBO32	831942	64	1669 - 1884	468	Val-2 to Thr-7.			L0803: 7, L0766: 4, L0777: 4, L0666: 3, H0521: 3, T0115: 2,			





56	HCE3B04	831151	66	1588 - 1686	470		L0803: 3, L0740: 3, H0052: 2, L0766: 2, L0666: 2, L0756: 2, L0717: 1, L0646: 1, L0662: 1, L0649: 1, L0634: 1, L0659: 1, L0791: 1, L0663: 1, L0664: 1, L0352: 1, S0328: 1, L0752: 1, L0758: 1 and L0594: 1.		
57	HCE5F78	838101	67	566 - 664	471	Tyr-21 to Lys-30.	H0052: 2 and H0445: 2.	2	
58	HCEEE79	560609	68	131 - 298	472	Gly-35 to Pro-41.	H0052: 1		
59	HCEEQ25	531784	69	111 - 182	473	Met-14 to Asn-19.	H0052: 1 and H0144: 1.		
60	HCEEU18	688041	70	209 - 340	474		H0052: 1	5	
61	HCEFZ82	831745	71	215 - 1012	475	Tyr-30 to Gln-35, Asn-114 to Lys-119, Ser-161 to Ala-171, Arg-183 to Gly-189, Pro-205 to Ala-211, Lys-231 to Trp-237, Gly-246 to Lys-265.	L0748: 11, H0052: 8, L0803: 8, L0749: 8, L0770: 7, L0439: 5, L0746: 4, L0752: 4, L3811: 3, H0575: 2, H0012: 2, H0031: 2, L0768: 2, L0804: 2, L0774: 2, L0740: 2, L0747: 2, L0756: 2, L0779: 2, L0757: 2, L0758: 2, L0592: 2, L0593: 2, H0556: 1, S0420: 1, S0376: 1, H0441: 1, H0632: 1, S0010: 1, T0115: 1, H0545: 1, H0009: 1, H0620: 1, H0197: 1, H0051: 1, S0388: 1,		

							S0051: 1, H0252: 1, H0032: 1, L0455: 1, H0591: 1, H0272: 1, L0564: 1, S0438: 1, S0344: 1, L0373: 1, L0646: 1, L0794: 1, L0766: 1, L0805: 1, L0776: 1, L0783: 1, L0809: 1, S0374: 1, H0522: 1, H0134: 1, L0780: 1, L0731: 1, L0759: 1, S0436: 1, L0597: 1, H0543: 1, H0423: 1 and L0600: 1.		
62	HCEGG08	844506	72	1114 - 1197	476		L0439: 15, H0052: 11, S0007: 9, L0438: 6, L0731: 6, L0779: 5, L0754: 4, H0550: 3, L0769: 3, S0126: 3, L0743: 3, H0194: 2, H0687: 2, H0623: 2, L0768: 2, L0776: 2, L0659: 2, L0666: 2, L0663: 2, H0689: 2, S0330: 2, L0748: 2, L0786: 2, L0777: 2, L0752: 2, L0758: 2, L0608: 2, H0352: 2, H0662: 1, S0356: 1, S0354: 1, S0444: 1, S0045: 1, S0476: 1, H0441: 1, H0431: 1,	?, 10, I, III	







									S0392: 1, S0037: 1, L0742: 1, L0439: 1, L0745: 1, L0747: 1, L0750: 1, L0777: 1, S0436: 1, L0485: 1, L0608: 1, S0011: 1, H0653: 1 and H0422: 1.			
64	HCFLT90	788578	74	527 - 532	478				L0777: 11, L0745: 9, L0754: 7, L0769: 4, L0747: 4, L0766: 3, L0649: 3, L0749: 3, L0779: 3, L0757: 3, H0580: 2, H0266: 2, H0181: 2, H0617: 2, L0770: 2, H0651: 2, H0522: 2, L0748: 2, L0740: 2, L0746: 2, S0434: 2, H0136: 2, H0423: 2, H0716: 1, H0295: 1, H0657: 1, L3659: 1, H0459: 1, S0360: 1, S0410: 1, H0733: 1, S0132: 1, S0476: 1, S0300: 1, H0013: 1, L0021: 1, H0575: 1, S0010: 1, H0530: 1, H0545: 1, H0594: 1, H0292: 1, H0553: 1, L0143: 1, H0068: 1, S0036: 1, H0059: 1, H0561: 1, H0641: 1, S0344: 1,			



								S0426: 1, L0640: 1, L0764: 1, L0771: 1, L0388: 1, L0659: 1, L0517: 1, L0545: 1, L0543: 1, L0791: 1, S0374: 1, H0547: 1, H0519: 1, H0648: 1, H0522: 1, H0478: 1, L0748: 1, L0751: 1, L0777: 1, L0780: 1, L0753: 1, S0434: 1, S0436: 1 and L0599: 1.			
66	HCRA Y10	695709	76	141 - 578	480			L0758: 6, H0545: 3, L0754: 3, L0759: 3, H0170: 2, L0766: 2, L0649: 2, L0665: 2, H0696: 2, H0177: 1, H0549: 1, H0392: 1, H0327: 1, L0695: 1, H0674: 1, H0529: 1, L0762: 1, L0769: 1, L0800: 1, L4753: 1, L0658: 1, L0809: 1, L2263: 1, L0740: 1 and L0777: 1.			
67	HCRBF72	828945	77	191 - 823	481	Gln-43 to Asn-49, Glu-59 to Gln-65, Lys-90 to Val-95, Glu-205 to Ser-211.		L0794: 7, H0551: 4, H0618: 3, H0617: 3, L0769: 3, L0747: 3, H0556: 2, S0356: 2, L0771: 2, L0789: 2, L0748: 2, L0757: 2, L0758: 2, L0596: 2,	1		





68	HCRNF78	793774	78	363 - 503	482		H0031: 3, L0777: 3, L0803: 2, L0439: 2, L0608: 2, S0114: 1, S0001: 1, S0356: 1, H0587: 1, H0013: 1, H0036: 1, H0274: 1, H0622: 1, S0036: 1, H0038: 1, H0561: 1, L0662: 1, L0794: 1, L0804: 1, L0657: 1, L0787: 1, L0791: 1, L0666: 1, L0663: 1, H0660: 1, L0758: 1, L0589: 1, S0194: 1 and H0423: 1.		
69	HCUAF85	589520	79	230 - 595	483		H0306: 2 and H0305: 1.		
70	HCUCF89	637986	80	189 - 278	484	Gly-14 to Asp-21.	H0306: 1, L0761: 1 and H0436: 1.		
71	HCUCK44	790277	81	598 - 780	485		L3450: 19, H0271: 18, S0002: 12, L0794: 12, S0144: 8, L3783: 8, L3807: 8, H0250: 7, L0777: 7, L3119: 6, L3729: 6, L0665: 6, H0518: 6, S0132: 5, H0264: 5, S0426: 5, S0328: 5, S0330: 5, L0758: 5, S0444: 4, S0344: 4, L0770: 4, L0776: 4, L0659: 4, S0052: 4, S0053: 4, L0743: 4, L0747: 4,	19	





									L0601: 1, L0603: 1, S0196: 1, L3632: 1 and H0352: 1.			
72	HCUDD64	835082	82	256 - 402	486	Met-1 to Ser-6, Gln-32 to Asn-39.			H0052: 3, S3012: 2, L0754: 2, H0402: 1, H0413: 1, S0374: 1, L0438: 1, L0748: 1 and L0740: 1.			
73	HCWAE64	535893	83	410 - 427	487				H0305: 1		9	
74	HCWFU39	651316	84	282 - 350	488				H0305: 3, H0589: 1, H0052: 1 and T0010: 1.		8	
75	HCWUL09	834722	85	333 - 368	489				H0305: 9, H0589: 2 and 6 S0001: 1.		6	
76	HDHAA42	695710	86	48 - 128	490				H0616: 4, L0803: 3, H0038: 2, L0809: 2, H0555: 2, L0439: 2, L0759: 2, L0005: 1, S0049: 1, H0569: 1, S0050: 1, L0163: 1, S0003: 1, S0440: 1, S0422: 1, L0771: 1, L0649: 1, L0804: 1, L0774: 1, L0775: 1, L0784: 1, L0659: 1, L0788: 1, L0664: 1, L0438: 1, H0648: 1, S0330: 1, L0602: 1, L0744: 1, L0748: 1, L0745: 1, L0747: 1, L0749: 1, L0752: 1, L0758: 1, S0436: 1, L0608: 1, S0196: 1 and		11	

77	HDHEB76	553622	87	416 - 454	491		S0412: 1. H0170: 1 and H0570: 1.		
78	HDPCW16	840358	88	172 - 339	492	Met-1 to Ser-7.	L0783: 7, H0441: 5, L0666: 4, H0617: 3, L3905: 3, L0439: 3, T0049: 2, H0341: 2, H0661: 2, L0717: 2, H0009: 2, L0471: 2, H0641: 2, L0764: 2, L0662: 2, L0659: 2, L0792: 2, L0663: 2, H0521: 2, L0748: 2, H0657: 1, H0255: 1, H0664: 1, H0402: 1, S0418: 1, S0045: 1, S0046: 1, H0749: 1, H0370: 1, H0600: 1, H0497: 1, H0333: 1, H0486: 1, L0021: 1, H0706: 1, H0544: 1, H0545: 1, H0046: 1, H0041: 1, H0178: 1, L0157: 1, H0673: 1, T0069: 1, L0351: 1, H0494: 1, H0625: 1, H0649: 1, L0502: 1, L0770: 1, L0769: 1, L5575: 1, L0645: 1, L0533: 1, L0493: 1, L0517: 1, L0518: 1, L0782: 1, L0809: 1, L0787: 1, L0789: 1,		

									L0665: 1, L0438: 1, H0520: 1, S0126: 1, H0690: 1, H0539: 1, L0609: 1, L0612: 1, L0747: 1, L0749: 1, L0786: 1, L0779: 1, L0731: 1, L0758: 1, H0653: 1, H0667: 1 and H0352: 1.			
79	HDPDI72	897277	89	23 - 385	493	Arg-63 to Phe-72, Ile-114 to Phe-120.			H0521: 2 and H0580: 1. 10			
80	HDPDJ58	587265	90	279 - 341	494				L0766: 14, H0457: 10, H0486: 4, H0581: 4, S0406: 4, H0422: 4, H0171: 3, L0655: 3, H0521: 3, L0779: 3, H0749: 2, H0156: 2, H0090: 2, H0551: 2, L0598: 2, L0666: 2, L0438: 2, L0748: 2, L0756: 2, L0777: 2, T0002: 1, H0656: 1, S0212: 1, H0662: 1, H0638: 1, S0442: 1, S0140: 1, H0747: 1, H0261: 1, H0587: 1, L3816: 1, H0574: 1, L0586: 1, L0022: 1, H0318: 1, H0123: 1, L0471: 1, H0039: 1, H0591: 1, T0041: 1, S0344: 1, S0426: 1,			

							UNKWN: 1, L0794: 1, L0387: 1, L0776: 1, L0606: 1, L0659: 1, L0367: 1, L0792: 1, L0793: 1, H0690: 1, H0539: 1, H0436: 1, L0439: 1, L0780: 1, L0755: 1, L0759: 1, H0445: 1, H0423: 1 and H0506: 1.			
81	HDPFF10	853513	91	186 - 1463	495	Trp-19 to Gly-24, Phe-101 to His-106, Glu-119 to Thr-124.	H0521: 7, L0599: 2, H0265: 1, H0717: 1, H0363: 1, H0545: 1, H0652: 1, L0764: 1, L0803: 1, L0805: 1 and H0518: 1.	3		
82	HDPFU43	790189	92	220 - 378	496		H0585: 8, L3388: 8, S0474: 7, H0622: 4, H0141: 3, H0553: 3, S0126: 3, H0539: 3, L0750: 3, H0556: 2, H0717: 2, H0581: 2, S0440: 2, S0344: 2, L0771: 2, L0774: 2, L0664: 2, S0380: 2, H0521: 2, L0751: 2, L0755: 2, L3643: 1, H0650: 1, H0306: 1, S0420: 1, L0617: 1, S0444: 1, S0360: 1, H0580: 1, S0046: 1, H0619: 1, H0549: 1,			



									H0486: 1, T0039: 1, L0021: 1, H0274: 1, H0457: 1, H0012: 1, H0620: 1, S0003: 1, S0214: 1, H0615: 1, H0628: 1, H0087: 1, H0551: 1, S0438: 1, S0422: 1, H0529: 1, L0770: 1, L0761: 1, L0767: 1, L0768: 1, L0804: 1, L0515: 1, L0809: 1, H0703: 1, H0711: 1, H0672: 1, S0378: 1, H0522: 1, H0696: 1, H0555: 1, S3014: 1, L0754: 1, L0747: 1, L0749: 1, L0731: 1, H0445: 1, S0436: 1, L0581: 1, S0026: 1, H0543: 1 and H0423: 1.					
83	HDPFY18	779450	93	161 - 184	497				S0114: 1, H0427: 1, H0123: 1, H0688: 1, H0264: 1, L0547: 1, L0518: 1, L3811: 1, H0521: 1, H0445: 1 and H0543: 1.	11				
84	HDPIE44	899328	94	169 - 351	498				L3811: 7, L0439: 7, L0794: 6, L0759: 5, L0591: 5, L0803: 4, L0805: 4, L2653: 4, H0547: 4, L0748: 4,					









87	HDPOO76	838594	97	109 - 159	501		S0474: 29, L0766: 11, H0521: 10, L0803: 7, L0748: 6, L0717: 5, L0759: 5, S0003: 4, L3832: 4, H0663: 3, H0156: 3, L0598: 3, L0770: 3, L0771: 3, L0804: 3, L2439: 3, H0522: 3, L0731: 3, S0436: 3, H0486: 2, S0426: 2, L0805: 2, L0659: 2, L2260: 2, S0126: 2, S0406: 2, L0749: 2, L0755: 2, L0757: 2, L0758: 2, L0590: 2, S0026: 2, H0716: 1, H0341: 1, S0212: 1, L0481: 1, S0444: 1, S0360: 1, L3649: 1, H0637: 1, H0580: 1, H0734: 1, H0749: 1, L3092: 1, H0619: 1, L3388: 1, H0586: 1, H0574: 1, H0427: 1, L0021: 1, H0575: 1, H0318: 1, H0545: 1, H0024: 1, H0373: 1, H0071: 1, H0179: 1, S0214: 1, H0428: 1, H0674: 1, H0591: 1, H0616: 1, H0488: 1, H0494: 1,	5,7	
----	---------	--------	----	-----------	-----	--	---	-----	--

							S0438: 1, S0440: 1, H0647: 1, S0142: 1, UNKWN: 1, L0369: 1, L0763: 1, L0769: 1, L0646: 1, L0648: 1, L0662: 1, L0650: 1, L0775: 1, L0653: 1, L0776: 1, L0656: 1, L0782: 1, L0809: 1, L0519: 1, S0052: 1, L2657: 1, H0144: 1, L3823: 1, H0520: 1, H0547: 1, H0660: 1, S0380: 1, L0742: 1, L0439: 1, L0750: 1, L0777: 1, S0031: 1, H0445: 1, S0434: 1, H0665: 1, H0667: 1, S0194: 1, S0276: 1 and S0458: 1.				
88	HDPPD93	637588	98	28 - 66	502		L0794: 6, L0748: 6, H0556: 5, L0771: 5, H0052: 4, L0756: 4, L0596: 4, H0265: 3, H0341: 3, H0587: 3, L0662: 3, L0803: 3, L0790: 3, S0152: 3, L0750: 3, S0114: 2, S0360: 2, H0318: 2, L0471: 2, L0369: 2, L0763: 2, L0770: 2, L0764: 2, L0766: 2,				





								S0374: 1, L3828: 1, S0126: 1, H0711: 1, H0658: 1, H0666: 1, H0539: 1, H0753: 1, H0521: 1, H0522: 1, S0406: 1, H0555: 1, H0436: 1, L0439: 1, L0749: 1, S0031: 1, L0595: 1, H0136: 1, H0542: 1, H0423: 1, S0424: 1 and H0352: 1.			
89	HDPW82	778405	99	395 - 484	503			H0522: 1			
90	HDPXN20	801896	100	61 - 186	504	Glu-21 to Leu-26, Pro-34 to Ser-41.		H0521: 1	18		
91	HDTAU35	838139	101	260 - 313	505			H0486: 1			
92	HDTAV54	801898	102	191 - 292	506	Thr-20 to Gly-26.		L0751: 14, L0748: 8, L0605: 8, L0758: 6, L0750: 5, L0755: 5, L0757: 5, L0761: 4, S0406: 4, L0747: 4, L0752: 4, L0717: 3, L0659: 3, L0740: 3, L0754: 3, L0753: 3, L0731: 3, L0596: 3, S0444: 2, L0770: 2, L0769: 2, L0662: 2, L0768: 2, L0766: 2, L0774: 2, L0775: 2, H0435: 2, H0672: 2, S0330: 2, L0744: 2, L0745: 2, L0780: 2, S0436: 2, H0423: 2,	7		



									S0380: 1, H0704: 1, L0743: 1, L0779: 1, L0759: 1, L0588: 1, L0593: 1, L0361: 1, L0366: 1, H0653: 1, S0242: 1, H0422: 1, S0446: 1 and H0506: 1.			
93	HDTGW48	827285	103	375 - 464	507				H0591: 2, L0758: 2, H0585: 1, H0486: 1, H0618: 1, L0794: 1, L0804: 1, H0672: 1 and L0750: 1.	20		
94	HDTLM18	836057	104	345 - 524	508		Ile-47 to Ser-60.		H0486: 1 and L0599: 1.	6		
95	HE2CH58	838140	105	321 - 479	509				H0171: 3, S0376: 1, L0637: 1, L0768: 1, L0805: 1, L0659: 1, L0748: 1, L0759: 1 and L0595: 1.	2		
96	HE2PO93	771655	106	770 - 898	510				L0803: 5, L0731: 5, S0422: 4, L2903: 3, S0408: 2, H0040: 2, L0766: 2, L0666: 2, L2657: 2, H0144: 2, H0648: 2, L0748: 2, L0439: 2, L0754: 2, L0779: 2, H0170: 1, H0171: 1, S0114: 1, H0657: 1, L2285: 1, S0354: 1, S0360: 1, H0580: 1, H0742: 1, H0741: 1, H0749: 1, L2777: 1, L0717: 1,	5		

									H0411: 1, H0431: 1, H0586: 1, H0052: 1, H0596: 1, H0014: 1, S0388: 1, S0051: 1, S0003: 1, H0591: 1, T0042: 1, H0625: 1, H0509: 1, L0598: 1, H0026: 1, L0763: 1, L0639: 1, L0372: 1, L0646: 1, L0641: 1, L0768: 1, L0649: 1, L0651: 1, L0805: 1, L0776: 1, L0635: 1, L0664: 1, L0665: 1, L2264: 1, L2262: 1, S0374: 1, L0438: 1, L0352: 1, H0672: 1, S0380: 1, H0696: 1, H0134: 1, S0406: 1, H0478: 1, L0758: 1, L0759: 1, S0436: 1, S0011: 1 and S0424: 1.					
97	HE6AU52	562782	107	41 - 166	511	Gln-17 to Arg-24.	H0008: 1							
98	HE6CS65	762960	108	295 - 483	512	Trp-50 to Leu-55.	L0777: 16, L0748: 12, L0757: 11, L0776: 8, L0439: 7, H0692: 6, H0046: 6, L0769: 5, L0666: 5, S0242: 5, L0770: 4, L0771: 4, L0438: 4, L0743: 4, L0754: 4, L0749: 4, L0758: 4, S0444: 3,							



									H0412: 1, S0450: 1, S0440: 1, L0639: 1, L0637: 1, L0372: 1, L0646: 1, L0651: 1, L0806: 1, L0659: 1, L0792: 1, L0664: 1, L0665: 1, S0216: 1, H0144: 1, H0697: 1, S0374: 1, L3812: 1, H0520: 1, H0547: 1, H0658: 1, H0660: 1, H0648: 1, H0521: 1, H0696: 1, S0027: 1, S0028: 1, L0741: 1, L0740: 1, L0779: 1, L0731: 1, L0759: 1, S0260: 1, H0445: 1, S0434: 1, L0362: 1 and L0366: 1.				
99	HE6DO92	562767	109	38 - 115	513				H0265: 1 and H0100: 1. 7				
100	HE6EY13	847058	110	171 - 311	514	Thr-32 to Leu-37.			H0692: 12, L0748: 7, L0751: 7, S0434: 6, H0265: 5, H0494: 5, L0659: 5, H0545: 4, H0100: 4, L0766: 4, L0666: 3, S0126: 3, S0406: 3, L0743: 3, L0754: 3, L0750: 3, L0731: 3, L0361: 3, H0542: 3, H0657: 2, S0356: 2, S0358: 2, H0733: 2, S0007: 2,	17,3			



									L3905: 1, L0761: 1, L0667: 1, L0627: 1, L0646: 1, L0649: 1, L0803: 1, L0661: 1, L0657: 1, L0512: 1, L0518: 1, L0791: 1, L0793: 1, L0663: 1, H0144: 1, S0374: 1, L0438: 1, H0520: 1, H0670: 1, H0672: 1, S0328: 1, H0539: 1, H0518: 1, H0555: 1, H0478: 1, S3014: 1, S0027: 1, L0741: 1, L0744: 1, L0439: 1, L0752: 1, L0753: 1, L0755: 1, S0436: 1, L0591: 1, S0242: 1, H0423: 1, S0456: 1 and H0506: 1.				
101	HE8BQ49	589443	111	133 - 168	515			H0013: 2					
102	HE8SG96	862016	112	118 - 192	516		Tyr-16 to Gln-23.	H0244: 1 and S0106: 1, I13					
103	HE9CY05	834826	113	55 - 762	517		Ser-18 to Glu-24, Leu-121 to Asp-134, Pro-142 to Ala-154, Cys-185 to Val-203.	L0748: 8, L0749: 3, L0471: 2 and H0144: 1.					
104	HE9GG20	633719	114	319 - 348	518			L0748: 6, H0144: 3, S0010: 2, S0474: 2, L0439: 2, L0749: 2, H0717: 1, H0662: 1, H0734: 1, S6022: 1, S0222: 1, S0280: 1,					









								S0126: 1, H0672: 1, H0754: 1, S0152: 1, H0522: 1, H0696: 1, S0044: 1, S0406: 1, L0612: 1, S3012: 1, L0746: 1, L0786: 1, L0759: 1, H0445: 1, L0684: 1, L0608: 1, H0667: 1, S0276: 1 and H0422: 1.			
106	HEBCI18	831464	116	855 - 1064	520	Val-40 to Cys-45, Lys-58 to Thr-64.			2		
107	HEBDF77	692347	117	681 - 791	521			L0805: 6, L0438: 5, L0439: 5, L0794: 3, L0759: 2, L0005: 1, S0007: 1, H0351: 1, S0346: 1, L0157: 1, L0351: 1, L0769: 1, L0638: 1, L0776: 1, L0741: 1, L0756: 1, L0608: 1 and L0366: 1.	22		
108	HEBDQ91	840288	118	1211 - 1336	522			S0007: 5, L0805: 3, S6026: 1, L0769: 1, L0438: 1, L0741: 1, L0748: 1 and L0758: 1.	19		
109	HEBFR46	847064	119	200 - 289	523	Met-1 to Thr-6.		H0457: 10, H0550: 5, H0436: 5, H0549: 4, H0616: 4, L0519: 4, H0556: 3, H0580: 3, S0007: 3, S0046: 3, L0809: 3, L0747: 3, L0777: 3, S0436: 3,	7		



									L0748: 1, L0749: 1, H0595: 1, L0593: 1, S0194: 1 and S0276: 1.			
110	HEBGE07	798096	120	106 - 234	524				S0007: 1	18		
111	HELAT35	693175	121	215 - 277	525				S0045: 1 and H0100: 1.	5		
112	HELBUS4	637624	122	82 - 135	526				L0748: 3, S0045: 1, L0749: 1 and S0436: 1.	8		
113	HEMEY47	834491	123	440 - 472	527				L0717: 2, H0052: 2, L0527: 2, L0748: 2, L0750: 2, H0686: 1, S0442: 1, H0329: 1, S0046: 1, H0551: 1, H0538: 1, L0646: 1, L0663: 1, H0672: 1, S0152: 1, H0521: 1, H0522: 1, L0759: 1, L0581: 1 and L0593: 1.	14		
114	HEOMC46	866171	124	154 - 309	528		Ser-5 to Thr-10, Cys-36 to Glu-51.		H0749: 2, H0581: 2, H0457: 2 and S0116: 1.			
115	HEPBA14	855935	125	664 - 711	529				H0150: 1	3		
116	HEQAH80	701984	126	150 - 248	530				S0358: 9, L0757: 6, H0544: 2, H0545: 2, H0551: 2, L0770: 2, L0803: 2, L0665: 2, H0672: 2, L0747: 2, L0755: 2, L0731: 2, S0434: 2, L0591: 2, L0599: 2, L3658: 1, S0420: 1, S0376: 1, S0278: 1, H0635: 1, L0022: 1, H0042: 1, H0575: 1, H0184: 1,			







									H0445: 1, S0436: 1, L0588: 1, L0595: 1, L0362: 1, S0026: 1, S0242: 1, H0422: 1, S0424: 1, H0721: 1 and H0352: 1.			
118	HET67	704077	128	292 - 492	532				H0046: 21, L0803: 4, L0790: 2, L0750: 2, L0777: 2, L0758: 2, L0362: 2, S0280: 1, S0474: 1, L0769: 1, L0794: 1, L0774: 1, L0809: 1 and L0666: 1.	9		
119	HFCDW95	847383	129	151 - 159	533				L0766: 9, L0803: 8, H0341: 7, H0521: 7, L0770: 6, L0771: 6, L0754: 6, L0752: 6, L0731: 6, S0354: 5, S0422: 5, L0662: 5, H0519: 5, L0439: 5, L0779: 5, L0758: 5, S0436: 5, H0009: 4, H0673: 4, L0800: 4, L0521: 4, L0805: 4, L0659: 4, L0809: 4, L0438: 4, S0028: 4, L0485: 4, L0601: 4, H0657: 3, H0638: 3, S0418: 3, H0733: 3, S0007: 3, S0222: 3, L3655: 3, S0214: 3, H0529: 3, L0369: 3,	7		

					L0794: 3, L0649: 3, L0776: 3, L0665: 3, L3391: 3, H0144: 3, H0670: 3, S0406: 3, L0756: 3, L0755: 3, L0759: 3, H0667: 3, S0420: 2, S0358: 2, S0360: 2, H0580: 2, H0729: 2, S0476: 2, H0645: 2, S6026: 2, S0300: 2, L2543: 2, H0156: 2, S0010: 2, H0085: 2, H0178: 2, H0375: 2, S6028: 2, H0266: 2, S0003: 2, H0428: 2, H0169: 2, S0036: 2, H0090: 2, H0634: 2, L0640: 2, L0769: 2, L0637: 2, L0761: 2, L0646: 2, L0774: 2, L0775: 2, L0806: 2, L0807: 2, L0783: 2, L5622: 2, L0666: 2, L2653: 2, L2264: 2, H0725: 2, L3827: 2, H0547: 2, H0435: 2, H0659: 2, S0380: 2, S3014: 2, S0206: 2, L0740: 2, L0753: 2, L0757: 2, S0434: 2, L0596: 2, H0668: 2, H0542: 2,	
--	--	--	--	--	--	--





								S0276: 1, S0196: 1, H0543: 1, H0423: 1, S0460: 1, L3357: 1 and L3372: 1.			
120	HFCFD04	824057	130	170 - 217	534			H0009: 1			
121	HFEAY59	658685	131	154 - 276	535			Phe-2 to Trp-7. Arg-2 to Lys-8, Arg-22 to Lys-31.			
122	HFEBO17	852218	132	136 - 219	536			L0803: 4, L0438: 4, L0766: 2, L0526: 2, H0659: 2, S0444: 1, S0408: 1, H0421: 1, H0081: 1, H0050: 1, S0370: 1, L0770: 1, L0637: 1, L0646: 1, L0800: 1, L0662: 1, L0804: 1, L0607: 1, L0659: 1, L0790: 1, L0665: 1, L0352: 1, H0648: 1, H0651: 1, S0328: 1, H0436: 1, L0749: 1, L0750: 1, L0777: 1, L0752: 1, L0599: 1, S0242: 1 and H0422: 1.			
123	HFGAJ16	580824	133	40 - 135	537			L0747: 17, H0617: 14, L0740: 11, L0750: 9, L0752: 9, S0360: 8, L0751: 8, H0265: 7, S0344: 7, L0748: 7, H0545: 6, L0438: 6, H0539: 6, L0757: 6, L0591: 6, S0278: 5,	16,X		









124	HF1HZ75	827872	134	700 - 855	538	Pro-31 to Pro-36, Ser-39 to Ile-49.	H0707: 1, S0434: 1, L0587: 1, L0592: 1, L0599: 1, L0608: 1, L0593: 1, S0011: 1, S0192: 1, S0242: 1, H0543: 1, L0469: 1, L0698: 1, S0424: 1, H0293: 1 and H0712: 1.  H0251: 8, L0742: 6, L0748: 6, L0754: 6, H0013: 5, L0664: 5, L0439: 5, S0360: 4, S0140: 4, H0616: 4, H0144: 4, H0658: 4, L0602: 4, L0747: 4, L0752: 4, L0759: 4, S0132: 3, H0553: 3, L0770: 3, L5566: 3, L0665: 3, H0520: 3, H0670: 3, S0206: 3, L0751: 3, L0605: 3, S0114: 2, S0444: 2, S0408: 2, S0222: 2, H0455: 2, H0150: 2, H0644: 2, S0426: 2, H0529: 2, L0769: 2, L0764: 2, L0659: 2, L0740: 2, L0749: 2, L0777: 2, L0596: 2, H0265: 1, H0556: 1, H0716: 1, H0255: 1, S0418: 1, S0442: 1,			
-----	---------	--------	-----	-----------	-----	--	---	--	--	--





								L0768: 1, L0804: 1, L0774: 1, L0805: 1, L0655: 1, L0807: 1, L0526: 1, L0531: 1, H0689: 1, S0378: 1, S0152: 1, S0406: 1, H0732: 1, L0742: 1, L0748: 1, L0747: 1, L0753: 1, L0757: 1, S0194: 1, H0422: 1 and S0424: 1.				
126	HF1JA68	847074	136	283 - 414	540			S0194: 1	16			
127	HFKE05	827572	137	243 - 371	541	Ile-26 to Ala-42.		L0777: 7, S0358: 5, L0439: 5, L0751: 5, H0135: 4, H0265: 3, H0556: 3, L0770: 3, L0769: 3, L0662: 3, L0768: 3, L0731: 3, H0305: 2, H0083: 2, L0142: 2, S0208: 2, S0002: 2, L0663: 2, L0665: 2, H0521: 2, L0741: 2, L0747: 2, L0779: 2, H0543: 2, H0149: 1, H0657: 1, S0116: 1, S0001: 1, H0663: 1, S0356: 1, S0354: 1, H0580: 1, S0045: 1, H0549: 1, S6014: 1, H0309: 1, H0085: 1, H0234: 1, H0597: 1, H0544: 1,				

									H0546: 1, H0123: 1, H0012: 1, H0024: 1, H0356: 1, H0594: 1, T0006: 1, H0424: 1, H0644: 1, H0182: 1, H0617: 1, L0055: 1, H0673: 1, H0169: 1, H0038: 1, H0040: 1, H0100: 1, L0351: 1, T0041: 1, H0561: 1, H0132: 1, L0763: 1, L0638: 1, L0637: 1, L0372: 1, L0765: 1, L0648: 1, L0649: 1, L0774: 1, L0375: 1, L0807: 1, L0545: 1, L0529: 1, L0788: 1, L0666: 1, L0664: 1, S0374: 1, H0691: 1, H0658: 1, H0670: 1, H0666: 1, S0044: 1, S0028: 1, L0744: 1, L0749: 1, L0755: 1, L0758: 1, H0445: 1, S0436: 1, L0593: 1 and H0352: 1.					
128	HFKEU12	634006	138	6 - 173	542	Pro-18 to Thr-55.	H0012: 2 and L0805: 1.	15,5						
129	HFKFX64	566835	139	127 - 171	543		H0012: 3 and L0809: 1.	18,N/A						
130	HFPDS07	821646	140	2546 - 2623	544		L0803: 24, L0439: 13, H0052: 5, L0804: 5, L0774: 5, H0090: 4, L0659: 4, H0521: 4,	2						



									H0701: 1, L3811: 1, L3824: 1, H0547: 1, H0648: 1, S0152: 1, H0522: 1, S0406: 1, H0436: 1, S0028: 1, L0777: 1, L0755: 1, L0758: 1, S0260: 1, S0436: 1, L0366: 1, S0196: 1 and H0542: 1.			
131	HFRAB10	745380	141	203 - 340	545	Thr-26 to Ala-31.			L0439: 14, L0438: 6, L0794: 4, L0770: 3, S0222: 2, H0271: 2, L0776: 2, L0756: 2, L0758: 2, S0001: 1, S0278: 1, H0441: 1, S0010: 1, H0052: 1, S0050: 1, S0366: 1, T0042: 1, L0662: 1, S0428: 1, L0352: 1, H0547: 1 and L0780: 1.	3		
132	HFTBM38	638338	142	577 - 669	546				L0439: 14, H0052: 9, L0770: 3, H0544: 2, L0769: 2, L0650: 2, L0438: 2, H0593: 2, L0742: 2, L0779: 2, L0758: 2, S0040: 1, H0581: 1, H0009: 1, H0567: 1, H0566: 1, H0123: 1, H0266: 1, H0687: 1, H0433: 1, H0100: 1, S0002: 1, L0369: 1, L0640: 1,			

133	HFVGK35	731868	143	14 - 31	547			L0639: 1, L0637: 1, L5575: 1, L5565: 1, L0764: 1, L0521: 1, L0794: 1, L0803: 1, L0653: 1, L0655: 1, L0647: 1, L0367: 1, L5623: 1, L0790: 1, L0663: 1, L0665: 1, H0670: 1, S0406: 1, H0479: 1, L0743: 1, L0751: 1, L0747: 1, L0749: 1, L0757: 1, S0434: 1, H0665: 1 and H0352: 1.		
			143	14 - 31	547			L0766: 2, S0376: 1, S0444: 1, H0393: 1, H0411: 1, H0333: 1, L0021: 1, H0373: 1, H0688: 1, L0142: 1, H0087: 1, L0520: 1, L0769: 1, L0803: 1, L0664: 1, L0665: 1, H0436: 1, L0748: 1, L0747: 1, L0779: 1, L0759: 1 and H0217: 1.	15	
134	HFXBN86	866174	144	149 - 346	548	Gly-60 to Asp-65.		S0001: 1		
135	HFXBT66	580831	145	172 - 252	549			S0001: 1	13	
136	HFXFZ46	600361	146	258 - 278	550			S0001: 1		
137	HGBER72	826710	147	43 - 102	551			L0766: 12, H0436: 9, H0543: 8, L0769: 6, L0749: 6, L0731: 6, H0556: 5, L0655: 5,	9	





									T0023: 1, L0483: 1, H0604: 1, S0036: 1, H0135: 1, H0040: 1, H0264: 1, S0039: 1, L0640: 1, L0763: 1, L0770: 1, L0761: 1, L0648: 1, L0521: 1, L0533: 1, L0774: 1, L0775: 1, L0376: 1, L0378: 1, L0629: 1, L5623: 1, L0666: 1, L0664: 1, S0310: 1, L3811: 1, H0689: 1, H0659: 1, H0660: 1, H0648: 1, H0696: 1, H0576: 1, S0028: 1, L0742: 1, L0750: 1, L0779: 1, L0777: 1, L0752: 1, L0591: 1, L0601: 1, H0542: 1 and H0506: 1.					
138	HGBEY14	658691	148	233 - 352	552				L0766: 9, L0803: 8, L0777: 4, L0770: 3, H0411: 2, H0012: 2, L0809: 2, L0793: 2, L0747: 2, H0620: 1, H0014: 1, H0087: 1, L0662: 1, L0794: 1, L0776: 1, L0791: 1, L0666: 1, L0665: 1, H0435: 1, H0627: 1, L0749: 1, L0779: 1,					

									L0731: 1, L0758: 1, H0445: 1, S0026: 1 and H0667: 1.			
139	HGBGN34	648659	149	280 - 426	553	Asn-2 to Val-8.			L0747: 5, H0716: 2, H0427: 2, S0280: 2, H0662: 1, S0444: 1, H0441: 1, H0492: 1, T0001: 1, H0014: 1, H0030: 1, H0674: 1, L5575: 1, L0659: 1, S0330: 1, L0752: 1 and S0436: 1.			
140	HGLBG15	701990	150	191 - 271	554				L0803: 19, S0474: 17, L0748: 13, S0408: 11, H0351: 11, L2669: 11, L2504: 10, L0770: 10, L0805: 9, L0439: 9, L0754: 9, S0422: 8, L0809: 8, L0794: 6, L0755: 6, L0731: 6, L0758: 6, S0360: 5, H0265: 4, S0414: 4, H0581: 4, H0271: 4, L0771: 4, L0804: 4, L0776: 4, L0659: 4, L0666: 4, L0749: 4, L0591: 4, H0327: 3, L0806: 3, L0655: 3, L0636: 3, L0565: 3, H0436: 3, L0777: 3, S0434: 3, S0436: 3, S0412: 3, S0116: 2,	7		





								S0027: 1, L0742: 1, L0744: 1, L0751: 1, L0745: 1, L0747: 1, L0779: 1, L0780: 1, L0757: 1, L0759: 1, S0031: 1, S0260: 1, L0596: 1, L0605: 1, L0595: 1, S0026: 1, S0192: 1, S0242: 1, H0542: 1, H0543: 1, S0042: 1 and S0462: 1.			
141	HHEGS55	858372	151	159 - 269	555			H0542: 5	15		
142	HHEOW19	886174	152	183 - 377	556	Ala-41 to Pro-57.		L0748: 4, L0745: 4, L0775: 3, L0776: 3, L0758: 3, H0458: 2, H0050: 2, S0003: 2, H0529: 2, L0764: 2, L0747: 2, L0599: 2, L0362: 2, H0556: 1, S0116: 1, S0282: 1, H0662: 1, H0305: 1, S0420: 1, S0444: 1, H0329: 1, H0351: 1, H0411: 1, S0278: 1, H0438: 1, T0039: 1, H0635: 1, H0156: 1, H0235: 1, H0327: 1, L0471: 1, H0428: 1, H0031: 1, H0644: 1, H0032: 1, S0366: 1, H0038: 1, H0616: 1, T0067: 1, H0477: 1,			









144	HHFFF87	778071	154	229 - 354	558	Ser-5 to Gly-11, Pro-25 to Tyr-31.	L0748: 18, L0747: 14, L0749: 12, L0731: 12, L0766: 10, L0771: 9, L0809: 9, L0666: 7, L0754: 7, H0556: 6, L0775: 6, L0665: 6, L0751: 6, L0663: 5, S0380: 5, L0439: 5, L0750: 5, L0755: 5, H0333: 4, H0597: 4, H0024: 4, H0039: 4, H0551: 4, H0413: 4, L0769: 4, L0662: 4, L0794: 4, L0649: 4, L0783: 4, L0742: 4, L0759: 4, L0596: 4, L0591: 4, H0624: 3, S0356: 3, H0156: 3, S0010: 3, H0328: 3, H0553: 3, H0038: 3, H0494: 3, H0633: 3, L0637: 3, L0776: 3, L0659: 3, L0438: 3, H0658: 3, S0406: 3, L0740: 3, L0745: 3, L0777: 3, L0752: 3, H0265: 2, H0661: 2, L3659: 2, S0418: 2, S0442: 2, S0354: 2, S0444: 2, S0360: 2, S0045: 2, L0717: 2, S0222: 2, H0331: 2,		
-----	---------	--------	-----	-----------	-----	---------------------------------------	---	--	--



					H0050: 1, L0471: 1, L0163: 1, S0051: 1, H0083: 1, H0355: 1, H0594: 1, H0271: 1, H0416: 1, H0687: 1, S0314: 1, H0688: 1, H0428: 1, H0622: 1, T0023: 1, L0483: 1, H0644: 1, H0628: 1, H0617: 1, H0090: 1, H0040: 1, H0264: 1, H0059: 1, H0100: 1, L0564: 1, S0150: 1, H0646: 1, S0422: 1, L0520: 1, L0638: 1, L0796: 1, L3905: 1, L5566: 1, L0646: 1, L0764: 1, L0521: 1, L0363: 1, L0768: 1, L0650: 1, L0774: 1, L0375: 1, L0651: 1, L0606: 1, L0807: 1, L0656: 1, L0382: 1, L0529: 1, L0788: 1, L0664: 1, L0352: 1, H0519: 1, H0690: 1, H0435: 1, H0660: 1, H0666: 1, H0672: 1, H0651: 1, S0330: 1, H0539: 1, H0752: 1, S0152: 1, H0521: 1, H0522: 1, H0436: 1,				
--	--	--	--	--	--	--	--	--	--

									S3014: 1, S0027: 1, L0744: 1, L0756: 1, L0779: 1, L0780: 1, L0753: 1, H0445: 1, L0485: 1, L0581: 1, L0608: 1, L0366: 1, H0653: 1 and S0276: 1.			
145	HHFFL34	753230	155	42 - 713	559	Asn-146 to Arg-157, Leu-168 to Asn-183, Gln-189 to Asn-199, Gln-206 to Ser-217.			H0599: 3, L0766: 3, S0037: 3, H0556: 2, H0242: 2, H0620: 2, H0543: 2, H0170: 1, T0002: 1, H0300: 1, S0360: 1, S0045: 1, S0476: 1, H0549: 1, H0309: 1, H0545: 1, H0081: 1, H0050: 1, S0388: 1, H0644: 1, T0041: 1, S0144: 1, H0529: 1, H0026: 1, L0659: 1, L2261: 1, H0520: 1, S0126: 1, H0539: 1, L0602: 1, S0152: 1, S0044: 1, H0436: 1, S3014: 1, S0027: 1, L0779: 1, L0731: 1 and S0424: 1.			
146	HHFFS40	824059	156	37 - 180	560				S0422: 7, L0748: 6, L0591: 6, L0766: 5, L0754: 5, H0423: 5, S0408: 4, H0069: 4, L0803: 4, L0602: 4, H0657: 3, S0442: 3,	5		





									L0777: 1, L0758: 1, L0480: 1, L0595: 1, H0667: 1, S0192: 1, S0194: 1, S0196: 1, H0422: 1 and S0424: 1.			
147	HHGCS78	634605	157	290 - 364	561				L0770: 7, H0333: 3, L0783: 2, L0731: 2, H0445: 2, S0418: 1, H0741: 1, S0002: 1, L0369: 1, L0643: 1, L0764: 1, L0794: 1, L0803: 1, L0775: 1, L0375: 1, L0378: 1, L0655: 1, L0809: 1, L0666: 1, L0664: 1, L0754: 1, L0747: 1, L0749: 1, L0752: 1 and L0591: 1.			
148	HHGDT26	658692	158	181 - 207	562				L0748: 2, S0218: 1, H0333: 1, H0271: 1, S0210: 1, L0776: 1, S0188: 1, L0745: 1 and H0423: 1.	18		
149	HHPFU28	824573	159	156 - 239	563	Ser-12 to Tyr-17.			L0622: 2, L0518: 2, L0382: 2, L0663: 2, L0750: 2, L0752: 2, L0362: 2, S0114: 1, S0420: 1, S0354: 1, S0444: 1, S0222: 1, S0010: 1, H0046: 1, H0051: 1, L0483: 1, H0644: 1, H0412: 1,	4		



150	HHSBI65	801910	160	62 - 229	564	Ala-16 to Val-35.	H0529: 1, L0794: 1, L0561: 1, L0666: 1, S0330: 1, S0028: 1, L0779: 1, L0777: 1, L0758: 1, S0031: 1, H0444: 1 and L0592: 1. L0439: 7, L0794: 5, L0766: 5, S0354: 2, H0549: 2, S0051: 2, S0142: 2, L0372: 2, L0809: 2, L0438: 2, H0658: 2, H0650: 1, H0381: 1, S0116: 1, S0356: 1, S0360: 1, H0261: 1, H0586: 1, H0486: 1, H0036: 1, H0052: 1, L0738: 1, H0457: 1, H0014: 1, H0051: 1, H0617: 1, H0032: 1, H0561: 1, S0440: 1, H0633: 1, L0763: 1, L0761: 1, L0800: 1, L0644: 1, L0645: 1, L0764: 1, L0648: 1, L0655: 1, L0657: 1, L0658: 1, L0368: 1, L0665: 1, L3811: 1, S0044: 1, S0406: 1, H0626: 1, L0731: 1, S0434: 1, S0436: 1, H0653: 1 and H0423: 1.	8		
-----	---------	--------	-----	----------	-----	-------------------	--	---	--	--

151	HHSDI53	862028	161	221 - 295	565		L0766: 10, L0752: 8, L0439: 6, L0747: 6, L0740: 5, L0756: 5, S0408: 4, L0779: 4, L0777: 4, L0731: 4, S0051: 3, H0169: 3, L0803: 3, L0774: 3, L0809: 3, L0754: 3, S0360: 2, H0574: 2, S0422: 2, L0763: 2, L0805: 2, L0666: 2, L0663: 2, L0751: 2, L0755: 2, L0759: 2, L0601: 2, H0624: 1, S0040: 1, H0713: 1, S0114: 1, S0298: 1, S0420: 1, S0444: 1, H0580: 1, H0730: 1, H0733: 1, L3388: 1, H0351: 1, H0600: 1, H0331: 1, H0013: 1, L0021: 1, H0575: 1, H0590: 1, T0110: 1, H0012: 1, H0615: 1, H0031: 1, H0553: 1, H0591: 1, S0440: 1, H0646: 1, S0002: 1, L0772: 1, L0645: 1, L0773: 1, L0662: 1, L0794: 1, L0381: 1, L0775: 1, L0776: 1, L0657: 1, L0659: 1,	I,18	
-----	---------	--------	-----	-----------	-----	--	---	------	--



									S0144: 1, L0769: 1, L0638: 1, L0643: 1, L0773: 1, L0648: 1, L0766: 1, L0381: 1, L0806: 1, L0655: 1, L0606: 1, L0663: 1, H0144: 1, H0520: 1, H0651: 1, L0743: 1, L0731: 1, L0605: 1, L0591: 1, L0592: 1 and H0542: 1.				
153	HHSGL28	801912	163	453 - 473	567				L0439: 8, L0438: 3, S0440: 2, L0666: 2, H0170: 1, S0442: 1, H0318: 1, S0049: 1, H0052: 1, H0050: 1, H0057: 1, S0388: 1, S0214: 1, H0598: 1, S0036: 1, H0063: 1, H0551: 1, L0520: 1, L0796: 1, L0662: 1, L0766: 1, L0664: 1, H0547: 1, H0435: 1, H0521: 1, L0779: 1, L0777: 1, L0752: 1 and L0594: 1.	2,8			
154	HISBA38	561711	164	169 - 279	568				L0766: 3, H0318: 1 and H0539: 1.	9			
155	HJMAA03	824062	165	527 - 556	569				L0749: 8, L0803: 5, L0748: 5, L0777: 5, L0794: 4, L0766: 4, L0804: 4, H0135: 3,				



156	HJMAV41	862029	166	207 - 290	570				H0659: 1, S0152: 1, S0404: 1, L0751: 1, L0747: 1, L0750: 1, L0779: 1, S0436: 1, L0608: 1, S0276: 1, H0543: 1, H0506: 1 and H0352: 1.			
									L0742: 15, L0439: 7, S0007: 5, L0741: 4, H0135: 3, L0516: 2, H0052: 2, L0438: 2, L0426: 1, H0402: 1, H0351: 1, S0222: 1, H0441: 1, H0333: 1, H0545: 1, S0388: 1, S0038: 1, L0351: 1, L0370: 1, L0770: 1, L0769: 1, L5566: 1, L0805: 1, L0659: 1, L0792: 1, L0793: 1, H0547: 1, L0750: 1, L0759: 1, L0366: 1, H0008: 1, H0721: 1 and H0352: 1.	19		
157	HJMAV90	793678	167	2492 - 2596	571				L0777: 9, L0757: 9, L0764: 8, L0809: 6, L0747: 6, H0674: 4, L0783: 4, L0666: 4, L0748: 4, L0751: 4, L0731: 4, L0591: 4, L0770: 3, L0372: 3, L0662: 3, L0775: 3,			

















								S0142: 1, L0640: 1, L0667: 1, L0764: 1, L0662: 1, L0804: 1, L0659: 1, L0517: 1, L0789: 1, L4559: 1, L0664: 1, S0126: 1, H0435: 1, H0539: 1, S0152: 1, H0521: 1, H0522: 1, S0027: 1, L0779: 1, L0758: 1, L0485: 1, L0601: 1, S0026: 1, H0667: 1, S0192: 1, H0542: 1 and H0506: 1.			
162	HKACI79	853361	172	207 - 359	576	Ser-37 to Gly-43.	H0659: 2, S0418: 1, L0004: 1, H0041: 1, H0087: 1, H0494: 1, H0646: 1, S0422: 1, L0373: 1, L0766: 1, L0665: 1, S0380: 1, L0748: 1, L0740: 1 and L0589: 1.	12p13,17,UNK			
163	HKAFF50	790192	173	343 - 495	577	Leu-19 to Gln-29.	S0114: 1, S0354: 1, S0046: 1, H0392: 1, T0010: 1, H0038: 1, H0616: 1, H0494: 1, H0561: 1, L0790: 1, H0539: 1, L0602: 1, S0332: 1, L0740: 1, L0749: 1, L0779: 1, L0731: 1 and S0424: 1.				
164	HKGBF25	738797	174	261 - 371	578		H0538: 1	1			

165	HKMLK03	734213	175	214 - 249	579			H0431: 1, L0352: 1, H0478: 1 and H0445: 1.	I6	
166	HKMLM95	840367	176	390 - 404	580			S0474: 13, L0748: 7, H0734: 6, L0740: 6, L0754: 6, L0439: 5, L0747: 5, S0003: 4, L0770: 4, L0662: 4, L0805: 4, S0134: 3, H0638: 3, H0735: 3, S0222: 3, L0764: 3, L0783: 3, L0731: 3, L0758: 3, S0358: 2, H0050: 2, L0471: 2, S0364: 2, H0591: 2, H0264: 2, L0763: 2, L0794: 2, L0766: 2, L0657: 2, L0517: 2, L5622: 2, H0723: 2, H0521: 2, L0756: 2, L0757: 2, L0485: 2, L0604: 2, L0595: 2, H0739: 1, T0002: 1, H0222: 1, S0040: 1, S0114: 1, H0583: 1, S0282: 1, S0418: 1, S0420: 1, L0534: 1, L0539: 1, S0356: 1, S0444: 1, S0360: 1, H0730: 1, H0733: 1, S0007: 1, S0045: 1, S0046: 1, S0132: 1, L0717: 1, H0431: 1,		





167	HLDBG17	855953	177	184 - 309	581	Leu-29 to His-34.	L0596: 1, L0590: 1, L0608: 1, L0593: 1, L0361: 1, L0601: 1, S0106: 1, H0668: 1, S0026: 1, H0665: 1, S0242: 1, H0543: 1, H0422: 1 and H0506: 1.  L0581: 185, H0509: 97, 10 H0510: 36, H0014: 25, H0355: 18, H0393: 14, L0748: 13, H0574: 12, H0331: 9, H0057: 5, H0144: 5, H0015: 3, L0605: 3, H0357: 2, H0427: 2, L0663: 2, L0749: 2, L0756: 2, H0662: 1, H0351: 1, H0349: 1, H0047: 1, H0038: 1, L0521: 1, L0518: 1, L0809: 1, L0787: 1, L0438: 1, L0439: 1, L0747: 1, L0759: 1 and S0412: 1.			
168	HLDCAS4	842190	178	550 - 690	582		L0157: 11, L0005: 3, H0619: 2, L0771: 2, L0766: 2, L0803: 2, S0152: 2, L0740: 2, L0754: 2, H0716: 1, S0222: 1, S0010: 1, H0373: 1, H0428: 1, H0059: 1, H0509: 1, L0794: 1, L0804: 1,	10		

									L0805: 1, L0809: 1, L5622: 1, L0666: 1, L0665: 1, S0044: 1, L0749: 1, L0756: 1, L0759: 1, S0196: 1 and H0543: 1.			
169	HLDQU79	740755	179	99 - 1142	583	Leu-68 to Lys-74, Tyr-109 to Lys-115, Gln-200 to Val-205, Lys-207 to Lys-214, Glu-237 to Ile-244, Ala-271 to Thr-279, Ser-317 to Ser-329, Gln-342 to Gly-348.			L0748: 9, L0731: 7, L0771: 6, L0759: 6, H0013: 5, L0764: 4, L0747: 4, L0758: 4, H0265: 3, H0039: 3, H0038: 3, L0769: 3, L0766: 3, L0775: 3, H0144: 3, L0755: 3, S0444: 2, S0476: 2, H0318: 2, H0050: 2, L0471: 2, H0266: 2, L0374: 2, L0649: 2, L0805: 2, L0663: 2, L0664: 2, H0547: 2, S0126: 2, H0670: 2, L0740: 2, L0754: 2, L0750: 2, L0593: 2, H0667: 2, H0170: 1, H0171: 1, H0685: 1, H0662: 1, S0354: 1, S0360: 1, H0580: 1, H0728: 1, H0151: 1, H0747: 1, L3388: 1, H0357: 1, H0586: 1, H0331: 1, H0574: 1, H0635: 1, H0575: 1,			

									H0263: 1, H0596: 1, H0545: 1, H0012: 1, H0620: 1, H0350: 1, H0355: 1, H0510: 1, H0428: 1, H0604: 1, H0031: 1, H0553: 1, S0366: 1, H0040: 1, H0063: 1, H0059: 1, H0560: 1, H0561: 1, S0440: 1, S0422: 1, H0529: 1, L0640: 1, L0637: 1, L0761: 1, L0772: 1, L0646: 1, L4556: 1, L0774: 1, L0375: 1, L0653: 1, L0382: 1, L5622: 1, L0793: 1, L4501: 1, H0723: 1, L0352: 1, S0152: 1, S0350: 1, H0521: 1, H0696: 1, S0044: 1, H0627: 1, S0027: 1, L0749: 1, L0752: 1, H0595: 1, S0436: 1, L0591: 1, L0595: 1, L0361: 1, S0011: 1, S0194: 1, S0276: 1 and H0423: 1.				
	HLDQU79	837599	391	75 - 1121	795								
170	HLDRT09	830544	180	522 - 719	584	Ser-18 to Ser-30.	L0493: 15, L0511: 11, L0500: 7, L0508: 6, L0514: 6, L0510: 6, L0504: 4, L0794: 4,						

									L0499: 4, L0758: 4, L0507: 3, L0497: 3, L0439: 3, H0509: 2, L0505: 2, L0502: 2, L0503: 2, L0501: 2, L0509: 2, L0779: 2, H0265: 1, H0717: 1, H0656: 1, S0116: 1, H0483: 1, S0360: 1, H0431: 1, H0370: 1, L0015: 1, L0021: 1, H0744: 1, H0510: 1, H0181: 1, H0617: 1, H0708: 1, H0040: 1, H0633: 1, L0769: 1, L0639: 1, L3905: 1, L0667: 1, L0521: 1, L0662: 1, L0768: 1, L0649: 1, L0803: 1, L0804: 1, L0775: 1, L0515: 1, L0809: 1, L5622: 1, L0789: 1, L0791: 1, L0666: 1, H0144: 1, H0682: 1, H0659: 1, H0660: 1, H0672: 1, H0696: 1, L0748: 1, L0750: 1, S0192: 1 and L0697: 1.				
171	HLHAP05	638476	181	45 - 89	585	Gln-4 to Leu-14.	L0005: 3, H0024: 2, H0209: 1 and H0445: 1.	16					
172	HLHCS23	560663	182	25 - 129	586		H0024: 1	13					
173	HLIBO72	883431	183	167 - 550	587		L0764: 2, L0662: 2,						

									L0748: 2, L0731: 2, L0758: 2, S0212: 1, S0442: 1, S0376: 1, S0444: 1, S0360: 1, T0039: 1, H0545: 1, H0355: 1, S0214: 1, H0553: 1, L0055: 1, H0090: 1, H0551: 1, H0412: 1, H0413: 1, H0494: 1, S0438: 1, H0509: 1, H0652: 1, S0142: 1, L0772: 1, L0767: 1, L0794: 1, L0803: 1, L0659: 1, L0383: 1, L0545: 1, L0664: 1, H0682: 1, H0670: 1, S0380: 1, H0521: 1, H0522: 1, H0436: 1, S3014: 1, S0027: 1, L0754: 1, L0752: 1, S0434: 1, L0593: 1, H0653: 1, H0665: 1 and S0196: 1.					
174	HLICE88	840321	184	708 - 716	588				H0014: 72, L3388: 60, H0509: 49, L0581: 44, H0355: 43, H0574: 32, H0393: 30, H0632: 21, H0510: 18, S0438: 18, H0098: 15, H0144: 14, H0331: 13, H0015: 8, L0748: 8, H0722: 7, L3387: 7, H0741: 5,					





								L0599: 1, L0362: 1, L0601: 1, H0543: 1 and L0600: 1.			
176	HLJBS28	658742	186	359 - 412	590			L0766: 8, L0803: 3, H0659: 3, L0758: 3, L0598: 2, L0649: 2, L0805: 2, L0655: 2, L0731: 2, L0759: 2, S0342: 1, H0657: 1, L3388: 1, L0021: 1, H0375: 1, H0615: 1, H0428: 1, L0638: 1, L0637: 1, L0651: 1, L0659: 1, L0791: 1, H0648: 1, S0328: 1, H0752: 1, L0744: 1, L0747: 1, L0756: 1, L0752: 1, H0423: 1 and H0422: 1.	5		
177	HLMBW89	701996	187	47 - 112	591	His-15 to Gly-21.		H0556: 10, L0803: 4, L0764: 3, L0439: 3, S0358: 2, H0619: 2, H0331: 2, H0620: 2, L0646: 2, L0804: 2, L0809: 2, L0666: 2, L0747: 2, L0757: 2, L0758: 2, L0588: 2, L0718: 2, H0265: 1, H0341: 1, S0212: 1, H0255: 1, H0661: 1, H0663: 1, S0420: 1, S0444: 1, H0637: 1.	11,16,3,8		



								H0580: 1, H0733: 1, H0351: 1, H0600: 1, H0333: 1, H0632: 1, H0618: 1, H0253: 1, H0052: 1, H0012: 1, H0266: 1, H0615: 1, H0424: 1, H0040: 1, H0264: 1, S0438: 1, S0440: 1, L0763: 1, L0770: 1, L3905: 1, L0773: 1, L0766: 1, L0653: 1, L0659: 1, L0665: 1, L2259: 1, L2261: 1, L0438: 1, H0684: 1, H0658: 1, S0330: 1, S0406: 1, L0748: 1, L0749: 1, L0777: 1, L0608: 1, H0542: 1, H0543: 1 and H0423: 1.			
178	HLMGP50	647603	188	214 - 246	592			H0255: 2, H0385: 1, L0753: 1 and H0595: 1.	X		
179	HLMJB64	658699	189	12 - 161	593	Ser-6 to Gly-11.		H0521: 11, L0751: 9, L0777: 9, H0255: 8, L0747: 8, S0360: 7, L0766: 7, H0542: 7, L0754: 6, L0749: 6, L0757: 6, H0265: 5, H0052: 5, L0659: 5, L0665: 5, S0126: 5, H0539: 5, L0748: 5, L0439: 5, L0740: 5,	20		





	H0201: 1, S0051: 1, H0510: 1, H0286: 1, H0428: 1, T0006: 1, H0424: 1, H0628: 1, H0606: 1, H0673: 1, H0124: 1, H0038: 1, H0634: 1, H0063: 1, H0379: 1, H0272: 1, H0488: 1, H0412: 1, H0413: 1, S0382: 1, S0438: 1, S0142: 1, S0344: 1, S0210: 1, S0426: 1, L0506: 1, L0639: 1, L0761: 1, L0772: 1, L0646: 1, L0643: 1, L0644: 1, L0771: 1, L0648: 1, L0521: 1, L0794: 1, L0649: 1, L0775: 1, L0651: 1, L0378: 1, L0805: 1, L0807: 1, L0518: 1, L0783: 1, L0791: 1, L0664: 1, S0052: 1, S0216: 1, H0702: 1, H0701: 1, S0374: 1, H0520: 1, H0682: 1, H0683: 1, H0658: 1, H0670: 1, H0666: 1, S0328: 1, S0380: 1, S0404: 1, H0555: 1, H0576: 1, H0627: 1, L0612: 1,	
--	--	--







									L0768: 1, L0381: 1, L0388: 1, L0522: 1, L0784: 1, L0632: 1, L0378: 1, L0656: 1, L0783: 1, L0382: 1, L0532: 1, L0664: 1, L0665: 1, S0052: 1, L0565: 1, H0547: 1, H0519: 1, H0689: 1, H0682: 1, H0670: 1, H0518: 1, S0044: 1, H0576: 1, L0439: 1, L0746: 1, L0755: 1, H0595: 1, S0436: 1, L0581: 1, H0667: 1 and H0352: 1.				
181	HLQCL64	864966	191	3 - 548	595				H0574: 7, L3388: 4, S0438: 3, S0428: 3, H0632: 2, H0069: 2, H0510: 2, H0634: 2, S0142: 2, S0052: 2, S0216: 2, H0489: 1, H0742: 1, S0278: 1, H0098: 1, H0271: 1, H0416: 1, S0002: 1, S0426: 1, L0770: 1, L0646: 1, L0800: 1, L0644: 1, L0764: 1, / L0803: 1, L0651: 1, L0525: 1, L0787: 1 and H0518: 1.	15			
182	HLWAV47	897769	192	200 - 298	596				L0754: 7, L0803: 4,				









185	HLYEU59	582084	195	258 - 389	599	L0740: 1, L0750: 1, L0786: 1 and L0777: 1.		
186	HLYGB19	838083	196	1863 - 1907	600	H0445: 3 and H0749: 1. 2  L0752: 10, L0471: 9, L0731: 8, H0422: 8, H0040: 5, L0641: 5, L0662: 4, L0439: 4, L0755: 4, S0114: 3, S0360: 3, L0766: 3, L0747: 3, L0749: 3, L0757: 3, H0445: 3, H0543: 3, H0265: 2, H0556: 2, S0116: 2, H0013: 2, H0244: 2, H0135: 2, H0264: 2, L0769: 2, L0639: 2, L0761: 2, L0774: 2, L0775: 2, L0776: 2, L0384: 2, L0663: 2, L0665: 2, L0565: 2, H0658: 2, H0539: 2, L3832: 2, L0744: 2, L0748: 2, L0750: 2, L0779: 2, L0758: 2, L0759: 2, S0134: 1, H0657: 1, S0212: 1, S0400: 1, S0420: 1, L3645: 1, S0046: 1, S0476: 1, L0717: 1, S0220: 1, L2491: 1, H0599: 1, H0706: 1, L0563: 1, H0545: 1,		



									L0771: 1, L0766: 1, L0776: 1, L0629: 1, L0657: 1, L0659: 1, L0792: 1, L0565: 1, H0345: 1, L0748: 1, L0754: 1, L0747: 1, L0749: 1, H0445: 1 and S0242: 1.			
188	HLYGY91	658703	198	211 - 339	602				H0692: 10, L0777: 10, L0805: 5, L0803: 3, L2497: 2, H0328: 2, L0662: 2, L0794: 2, L0809: 2, L3832: 2, L0748: 2, L0752: 2, L0599: 2, H0170: 1, H0402: 1, S0444: 1, S0360: 1, H0747: 1, L2486: 1, L3503: 1, H0427: 1, H0644: 1, H0038: 1, L0800: 1, L0648: 1, L0804: 1, H0670: 1, H0478: 1, L0731: 1, L0758: 1, H0445: 1, S0434: 1, L0591: 1 and L0362: 1.			
189	HMC6H60	654853	199	211 - 357	603				L0659: 10, T0040: 9, L0665: 9, L0759: 9, L0519: 8, L0776: 7, S0436: 7, L0744: 6, L0747: 6, L0749: 6, L0758: 6, S0418: 5, H0052: 5, H0457: 5,	6		









									S0380: 1, H0710: 1, H0521: 1, H0522: 1, H0627: 1, S0028: 1, L0741: 1, L0742: 1, L0439: 1, L0740: 1, L0756: 1, L0786: 1, L0780: 1, L0755: 1, L0581: 1, L0595: 1, L0601: 1, H0667: 1, S0192: 1, H0542: 1, L0718: 1 and S0424: 1.			
190	HMDAB29	584789	200	97 - 177	604				H0346: 1, H0598: 1 and S0330: 1.	1,4		
191	HMDAD44	566854	201	135 - 161	605				L0749: 3, H0346: 1, H0370: 1, H0427: 1 and L0439: 1.	2		
192	HMEBB82	783077	202	30 - 134	606				H0046: 7, L0471: 5, L0766: 5, H0124: 4, L5622: 4, L0666: 4, L0748: 4, L0779: 4, S0214: 3, S0422: 3, L0803: 3, H0144: 3, H0520: 3, H0521: 3, L0777: 3, L0758: 3, S0376: 2, S0360: 2, S0408: 2, L0717: 2, L2255: 2, H0431: 2, H0574: 2, H0014: 2, S0003: 2, H0674: 2, S0306: 2, L0646: 2, L0804: 2, L0526: 2, L0663: 2, L0665: 2,			



									L0363: 1, L5574: 1, L0774: 1, L0375: 1, L0527: 1, L0657: 1, L0656: 1, L0540: 1, L0782: 1, L5623: 1, L0787: 1, L0793: 1, L3827: 1, H0547: 1, H0666: 1, S0328: 1, S0044: 1, H0555: 1, H0732: 1, L0744: 1, L0740: 1, L0749: 1, L0756: 1, S0260: 1, L0595: 1, H0653: 1 and H0422: 1.		
193	HMEDE24	837027	203	900 - 1001	607	Asn-17 to Asn-22, Arg-27 to Lys-33.	H0266: 1				
194	HMELM75	587307	204	113 - 394	608		L0766: 7, L0764: 4, H0266: 3, L0749: 3, S0420: 2, L0646: 2, L0768: 2, L0747: 2, L0758: 2, L0608: 2, H0667: 2, S0424: 2, H0650: 1, H0661: 1, H0645: 1, H0486: 1, H0253: 1, H0606: 1, H0040: 1, H0264: 1, L0564: 1, L0369: 1, L0763: 1, L0769: 1, L0372: 1, L0771: 1, L0606: 1, L5623: 1, L0666: 1, L0665: 1, H0684: 1, S0328: 1,	1			

								S0152: 1, H0521: 1, L0748: 1, L0755: 1, H0595: 1, S0436: 1, L0593: 1, L0595: 1, H0668: 1, S0026: 1, H0665: 1 and H0542: 1.			
195	HMIK10	562774	205	195 - 290	609			S6028: 1	11		
196	HMIBD93	634227	206	983 - 1180	610	Pro-4 to Gly-13, Ala-42 to Ser-50.		L0439: 6, L0751: 5, L0770: 3, L0769: 3, L0764: 3, H0617: 2, L0766: 2, L0752: 2, H0445: 2, S6024: 1, H0351: 1, S0222: 1, H0586: 1, S0010: 1, S6028: 1, L0768: 1, L0794: 1, L0438: 1, L0747: 1, L0753: 1 and L0758: 1.	2		
197	HMIBF07	603528	207	229 - 249	611			S6028: 1			
198	HMICP65	847403	208	249 - 341	612			S0474: 12, H0156: 5, H0650: 3, L0666: 3, H0341: 2, H0393: 2, H0486: 2, H0052: 2, H0039: 2, H0135: 2, S0330: 2, L0748: 2, L0439: 2, L0757: 2, L0601: 2, H0224: 1, H0225: 1, S0134: 1, H0583: 1, H0657: 1, S0212: 1, S0282: 1, H0735: 1, S0046: 1, H0550: 1, H0431: 1,	1		

									L3653: 1, H0013: 1, H0042: 1, H0590: 1, S0010: 1, H0318: 1, H0046: 1, H0009: 1, H0050: 1, H0242: 1, S0388: 1, S6028: 1, H0271: 1, H0031: 1, H0644: 1, L0455: 1, L0370: 1, T0042: 1, H0560: 1, H0538: 1, L3904: 1, L0804: 1, L0805: 1, L0653: 1, L0776: 1, L0659: 1, L0787: 1, L2264: 1, H0547: 1, H0648: 1, H0539: 1, L0745: 1, S0436: 1 and S0242: 1.			
									H0391: 1			
									S0002: 1			
									H0009: 1 and S0002: 1.			
									H0457: 6, L0766: 6, L0777: 4, S0354: 3, S0474: 3, H0038: 3, L0747: 3, L0588: 3, L0581: 3, H0653: 3, H0265: 2, S0444: 2, H0734: 2, H0013: 2, H0591: 2, H0616: 2, S0002: 2, L0770: 2, L0775: 2, H0670: 2, L0748: 2, L0740: 2, L0749: 2, H0667: 2,			
									Met-1 to Val-7, Gly-15 to Tyr-22, Glu-38 to Asp-49, Gly-87 to Leu-93, Ala-138 to Gly-147, Pro-164 to Asn-170, Ser-183 to Glu-194, Arg-245 to Ser-261, Glu-280 to Asn-288, Arg-295 to Asp-315, Val-329 to Glu-343, Leu-367 to Pro-380.			



								H0436: 1, S3012: 1, S3014: 1, L0744: 1, L0439: 1, L0786: 1, L0780: 1, L0752: 1, L0755: 1, H0343: 1, S0436: 1, L0591: 1, L0366: 1 and S0242: 1.			
203	HMSHU20	847410	213	50 - 391	617	Ser-2 to Trp-7, Gln-44 to Lys-53, Ser-80 to Gly-88.		S0278: 4, L0740: 4, H0250: 2, H0581: 2, S0344: 2, S0002: 2, L0774: 2, S0116: 1, H0457: 1, H0031: 1, H0063: 1, S0142: 1, L0800: 1, S0216: 1, H0521: 1, L0744: 1, L0777: 1 and H0653: 1.	20		
204	HMSHY25	886183	214	656 - 763	618	His-1 to Gln-6, Glu-28 to Pro-35.		S0002: 1 and S0426: 1.			
205	HMTAB77	847411	215	769 - 915	619	Gly-3 to Thr-8.		H0436: 65, L0747: 25, H0521: 12, L0754: 11, L0471: 7, L0439: 7, S0358: 6, S0360: 5, L0809: 5, H0520: 5, L0731: 5, L0757: 5, L0599: 5, H0580: 4, H0581: 4, S0003: 4, H0551: 4, S0440: 4, L0803: 4, L0775: 4, L0517: 4, H0547: 4, H0519: 4, H0539: 4, L0750: 4, S0436: 4, H0624: 3, H0717: 3,			











									H0555: 1, L0749: 1, L0779: 1, L0780: 1, L0731: 1, H0445: 1, H0653: 1, S0192: 1 and H0542: 1.			
207	HMVDUI5	801969	217	274 - 351	621				H0436: 20, L0748: 6, L0750: 6, S0408: 3, H0100: 3, L0755: 3, H0657: 2, L0804: 2, L0666: 2, S0380: 2, L0752: 2, L0759: 2, H0713: 1, S0212: 1, L3659: 1, H0742: 1, S0046: 1, S0222: 1, H0746: 1, H0545: 1, H0009: 1, H0024: 1, T0023: 1, H0032: 1, T0067: 1, S0422: 1, L0763: 1, L0638: 1, L0772: 1, L0764: 1, L0765: 1, L0771: 1, L0794: 1, L0803: 1, L0774: 1, L0655: 1, L0382: 1, L3811: 1, H0689: 1, H0435: 1, S0330: 1, H0696: 1, L0740: 1, L0747: 1, L0731: 1, L0758: 1, S0436: 1 and L0608: 1.			
208	HMWJF53	758158	218	1015 - 1131	622				H0255: 7, H0318: 5, H0620: 5, L0754: 5, L0766: 4, L0666: 4,	2		



									T0023: 1, H0124: 1, H0090: 1, H0413: 1, H0560: 1, H0561: 1, S0372: 1, H0509: 1, H0652: 1, S0144: 1, S0422: 1, L0762: 1, L0770: 1, L0761: 1, L0373: 1, L0372: 1, L0645: 1, L0764: 1, L0771: 1, L0648: 1, L0768: 1, L0649: 1, L0804: 1, L0651: 1, L0806: 1, L0655: 1, L0659: 1, L0517: 1, L0528: 1, L0665: 1, H0698: 1, S0374: 1, L0438: 1, H0684: 1, H0658: 1, H0670: 1, S0328: 1, S0380: 1, H0134: 1, S0406: 1, L0743: 1, L0749: 1, L0750: 1, L0779: 1, L0759: 1, S0031: 1, H0445: 1, H0653: 1, S0194: 1, S0276: 1, H0542: 1 and S0460: 1.				
209	HNEAK81	722235	219	288 - 359	623				H0179: 1	11			
210	HNECL22	799541	220	472 - 576	624				L0748: 54, L0766: 20, L0754: 18, H0179: 12, L0777: 12, L0750: 11, L0749: 10, S0116: 9, H0271: 9, L0761: 9,	8			







								H0056: 1, H0623: 1, T0041: 1, T0042: 1, S0210: 1, S0002: 1, S0426: 1, L0598: 1, L0641: 1, L0764: 1, L0768: 1, L0807: 1, L0514: 1, L0658: 1, L0783: 1, L5623: 1, L0788: 1, L0663: 1, L0665: 1, S0374: 1, H0519: 1, S0122: 1, H0659: 1, H0658: 1, H0666: 1, H0672: 1, S0328: 1, H0521: 1, H0522: 1, S0406: 1, H0555: 1, H0478: 1, H0727: 1, L0742: 1, L0755: 1, L0731: 1, S0011: 1, S0026: 1, H0543: 1, H0423: 1, H0422: 1 and H0506: 1.				
211	HNECW49	639117	221	316 - 489	625	Cys-21 to Trp-26, Val-37 to Ser-53.	H0179: 2 and H0402: 1.					
212	HNEDH88	815675	222	70 - 171	626	Lys-22 to Gly-27.	L0748: 2 and H0179: 1.					
213	HNFAC50	815676	223	676 - 774	627	Lys-7 to Glu-18.	L0769: 5, L0756: 4, S0444: 3, L0774: 3, H0624: 2, S0408: 2, H0587: 2, L0764: 2, L0766: 2, H0170: 1, H0497: 1, H0333: 1, H0156: 1, L0022: 1, H0271: 1, S0344: 1,					





						Ala-50 to Trp-57, Lys-83 to Leu-93, Pro-103 to Gly-113.						p13,14,14q24, 15,16,17,18,19 2,21,22,22q11 4,5,6,7,unkno, X,Xp22	
216	HNGBH53	532614	226	47 - 187	630	Asn-14 to Glu-24.				S0052: 1	18		
217	HNGDQ38	825389	227	205 - 384	631	Pro-28 to Arg-33.				S0052: 1			
218	HNGDX18	1145071	228	237 - 965	632	Ser-21 to Ser-39, Gln-45 to Gln-61, Cys-124 to Ser-139.				H0457: 4, S0052: 4, H0271: 3, L0766: 3, H0543: 3, H0255: 2, H0402: 2, H0253: 2, L0805: 2, L0754: 2, H0422: 2, H0583: 1, H0650: 1, H0656: 1, H0484: 1, H0483: 1, H0254: 1, L3659: 1, S0442: 1, S0360: 1, H0580: 1, S0140: 1, H0747: 1, H0393: 1, H0486: 1, H0250: 1, H0618: 1, H0050: 1, H0630: 1, H0719: 1, H0182: 1, H0063: 1, H0087: 1, H0264: 1, H0488: 1, H0487: 1, L0351: 1, T0042: 1, S0448: 1, S0002: 1, L0761: 1, L0378: 1, L0655: 1, L4501: 1, H0539: 1, S0188: 1, S0146: 1, H0707: 1, L0599: 1, H0136: 1,	1		

	HNGDX18	866177	392	231 - 629	796	Ser-21 to Ser-39, Gln-45 to Gln-61, Cys-124 to Gly-130.	H0423: 1 and H0677: 1.		
219	HNGDY34	566863	229	73 - 126	633		S0052: 1	2,3,U	
220	HNGEA34	815678	230	58 - 192	634	His-26 to Ser-32.	H0393: 1 and S0052: 1.	2	
221	HNGGA68	638116	231	184 - 282	635	Ala-8 to Gly-20.	H0419: 1, H0305: 1 and S0052: 1.		
222	HNGIV64	561572	232	221 - 247	636		S0052: 1		
223	HNGJB41	852178	233	252 - 473	637		S0052: 1	22	
224	HNGKT41	836061	234	415 - 552	638		S0428: 1	5	
225	HNGNK44	834949	235	611 - 835	639	Ser-41 to Ser-48, Arg-61 to Trp-68.	L0581: 2 and S0428: 1.	19	
226	HNGNO53	836063	236	467 - 571	640		S0428: 2 and L0439: 1.	10,8	
227	HNGPI25	834942	237	544 - 621	641		H0251: 8, H0624: 4, L0752: 4, H0286: 1, L0598: 1, S0428: 1 and H0144: 1.	11	
228	HNHCT47	634691	238	73 - 192	642	Asn-25 to Thr-33.	S0053: 2 and S0046: 1.	11,17,5	
229	HNHFE71	834487	239	598 - 663	643		S0053: 1		
230	HNH GK22	597451	240	239 - 433	644		S0053: 2	7	
231	HNHHB10	634589	241	215 - 394	645	Pro-40 to Tyr-46.	H0059: 1 and S0053: 1.	19	
232	HNHKI74	777856	242	127 - 159	646		S0216: 1		
233	HNTBT17	855957	243	91 - 111	647		H0436: 15, L0766: 8, L0748: 8, S0422: 6, S0002: 5, L0666: 5, L0740: 5, H0650: 4, S0474: 4, L0803: 4, H0547: 4, H0670: 4, H0521: 4, L0439: 4, L0759: 4, H0422: 4, S0360: 3, L0776: 3,		









									L0744: 1, L0755: 1, H0445: 1, L0589: 1, L0485: 1 and H0423: 1.			
235	HODAG07	655356	245	43 - 174	649			Tyr-37 to Leu-43.	H0328: 1, L0640: 1, L0666: 1 and L0748: 1.	4		
236	HODBB70	520196	246	173 - 256	650				H0328: 1, L0789: 1, L0742: 1 and L0439: 1.	7,X		
237	HODBV05	825283	247	101 - 202	651				L0439: 2, H0171: 1, H0346: 1, H0052: 1, H0328: 1, H0553: 1, H0555: 1 and L0758: 1.	7		
238	HODCZ32	836069	248	248 - 280	652				H0328: 1	21		
239	HOFNU55	897611	249	230 - 385	653				H0415: 1			
240	HOGBF01	772573	250	309 - 371	654				H0435: 1			
241	HORBS82	638293	251	21 - 140	655			Gly-30 to Ser-35.	H0706: 2, L0809: 2, S0360: 1, L0623: 1, H0122: 1, H0041: 1, H0095: 1, H0292: 1, H0424: 1, S0364: 1, L0794: 1, L0787: 1, L0663: 1, H0780: 1, H0435: 1, L0743: 1, L0747: 1 and L0731: 1.	20		
242	HORBV76	839270	252	183 - 779	656			Gly-25 to Leu-38, Asp-56 to Gly-65, Ser-115 to Lys-121.	L0794: 2, L0608: 2, H0686: 1, S0278: 1, H0292: 1, H0031: 1, L0065: 1, S0344: 1, L0638: 1, L0662: 1, L0803: 1, L0659: 1, L0665: 1, L0749: 1 and L0780: 1.			
243	HOSEC25	688055	253	17 - 91	657			Thr-19 to Cys-24.	S0214: 1 and L0776: 1.	9		

244	HOSEI8I	562778	254	203 - 454	658	Lys-70 to Asn-76.	L0777: 2, S0214: 1 and H0539: 1.		
245	HOSEJ94	795132	255	848 - 934	659		L0731: 8, L0766: 6, S0474: 4, L0598: 4, L0774: 4, H0547: 4, L0752: 4, H0486: 3, S0003: 3, L0775: 3, L0745: 3, L0362: 3, H0170: 2, H0657: 2, H0733: 2, H0038: 2, S0440: 2, S0210: 2, L0770: 2, L0651: 2, L0555: 2, L0776: 2, L0655: 2, L0665: 2, L0438: 2, S0330: 2, H0539: 2, L0439: 2, L0758: 2, L0594: 2, S0412: 2, H0394: 1, S0040: 1, L0002: 1, H0650: 1, H0663: 1, S0358: 1, S0360: 1, L3649: 1, L2255: 1, H0441: 1, H0497: 1, H0574: 1, H0635: 1, H0156: 1, H0575: 1, H0036: 1, H0251: 1, L0163: 1, H0083: 1, H0594: 1, S0214: 1, H0328: 1, H0644: 1, L0055: 1, H0674: 1, H0634: 1, H0412: 1, S0438: 1, S0422: 1,		

									S0426: 1, UNKWN: 1, H0529: 1, L0520: 1, L0625: 1, L0637: 1, L0627: 1, L0772: 1, L0646: 1, L0764: 1, L0773: 1, L0521: 1, L0662: 1, L0768: 1, L0522: 1, L0650: 1, L0375: 1, L0806: 1, L0656: 1, L0790: 1, L0666: 1, L0663: 1, L0664: 1, S0374: 1, H0659: 1, H0672: 1, H0710: 1, H0696: 1, S0027: 1, S0028: 1, L0740: 1, L0750: 1, L0777: 1, L0753: 1, L0759: 1, L0592: 1, L0608: 1, L0361: 1, S0192: 1 and H0543: 1.				
246	HOUCA21	655359	256	200 - 301	660				S0040: 1, T0042: 1 and S0292: 1.	1,17,18,2,3			
247	HOUDE92	580866	257	70 - 336	661	Pro-22 to His-31, Ser-80 to Gln-88.			H0052: 17, L0745: 11, L0748: 10, H0547: 7, L0439: 7, L0755: 6, L0771: 5, L0774: 5, L0662: 4, L0746: 4, L0777: 4, S0474: 3, L0163: 3, H0059: 3, H0100: 3, L0775: 3, L0741: 3, H0261: 2, H0333: 2, H0194: 2,	12p13			

									H0545: 2, H0012: 2, H0617: 2, H0135: 2, L0770: 2, L0665: 2, L0438: 2, H0520: 2, L0747: 2, L0752: 2, L0753: 2, S0040: 1, L0717: 1, H0437: 1, H0550: 1, S6016: 1, H0497: 1, H0574: 1, H0599: 1, H0575: 1, H0618: 1, H0253: 1, H0041: 1, H0620: 1, H0373: 1, H0188: 1, H0124: 1, H0068: 1, H0040: 1, H0561: 1, S0448: 1, S0210: 1, L0763: 1, L0644: 1, L0767: 1, L0768: 1, L0375: 1, L0651: 1, L0659: 1, L0540: 1, L5622: 1, H0144: 1, H0593: 1, S0126: 1, H0539: 1, S0152: 1, H0694: 1, S0390: 1, S0028: 1, L0749: 1, L0786: 1, L0780: 1, L0731: 1, L0757: 1, L0758: 1, S0436: 1, L0592: 1 and S0276: 1.					
									S0040: 1					
248	HOUED72	858547	258	144 - 179	662				L0745: 15, S0414: 6, H0351: 5, H0013: 5,					
249	HOUFS04	771564	259	520 - 738	663									









251	HOVBD85	827362	261	252 - 332	665		H0252: 1, H0428: 1 and 14 L0439: 1.		
252	HPCAL26	762822	262	1021 - 1113	666		L0659: 11, S0126: 11, 11 L0731: 11, S0192: 11, L0666: 9, L0777: 7, T0049: 5, S0358: 5, L0771: 5, L0757: 5, S0360: 4, S0440: 4, L0740: 4, L0758: 4, S0212: 3, S0356: 3, S0046: 3, H0369: 3, H0545: 3, L0662: 3, L0774: 3, L0809: 3, H0519: 3, L0752: 3, S0011: 3, H0295: 2, H0662: 2, S0468: 2, H0012: 2, H0024: 2, H0356: 2, H0616: 2, H0268: 2, H0412: 2, L0646: 2, L0803: 2, S0013: 2, L0754: 2, L0747: 2, L0759: 2, S0040: 1, S0418: 1, S0442: 1, S0376: 1, H0676: 1, L0717: 1, H0550: 1, S0222: 1, H0574: 1, L0021: 1, H0575: 1, H0036: 1, H0590: 1, H0618: 1, T0048: 1, H0309: 1, H0596: 1, T0110: 1, H0546: 1, H0046: 1,		

										H0123: 1, H0014: 1, S0003: 1, S0022: 1, H0428: 1, H0622: 1, H0031: 1, H0673: 1, L0455: 1, H0316: 1, H0598: 1, H0163: 1, H0038: 1, H0433: 1, H0413: 1, T0069: 1, S0438: 1, H0633: 1, H0647: 1, S0210: 1, L0770: 1, L0769: 1, L0768: 1, L0794: 1, L0519: 1, L0789: 1, L0790: 1, L0664: 1, L0665: 1, H0144: 1, S0330: 1, S0136: 1, H0696: 1, S3014: 1, S0206: 1, L0751: 1, L0749: 1, L0756: 1, L0779: 1, S0031: 1, S0242: 1, S0194: 1 and S0276: 1.					
253	HPEBA84	753957	263	533 - 643	667					L0591: 2, L3643: 1, S0420: 1, L3388: 1, H0057: 1, H0166: 1, L0648: 1, L0518: 1, L0809: 1, L0519: 1, L0754: 1 and L0599: 1.	1,10				
254	HPFBA54	635539	264	258 - 395	668					H0169: 1, H0130: 1 and L0606: 1.					
255	HPFC136	855966	265	94 - 153	669					L0591: 4, L0754: 3, H0450: 2, H0486: 2,	10				

									H0046: 2, S0003: 2, H0494: 2, S0422: 2, L0659: 2, S0126: 2, H0659: 2, L0750: 2, L0601: 2, H0170: 1, H0556: 1, H0657: 1, S0420: 1, S0354: 1, H0734: 1, H0749: 1, H0455: 1, H0403: 1, H0600: 1, H0013: 1, H0156: 1, H0599: 1, H0744: 1, H0082: 1, S0214: 1, H0622: 1, H0031: 1, H0673: 1, H0169: 1, H0090: 1, H0038: 1, H0022: 1, H0560: 1, L0643: 1, L0771: 1, L0773: 1, L0655: 1, L0807: 1, L3872: 1, L0792: 1, L0665: 1, L3811: 1, S0378: 1, H0518: 1, S0152: 1, H0521: 1, L0748: 1, L0749: 1, L0757: 1, L0759: 1, S0434: 1, L0596: 1, L0605: 1 and H0653: 1.				
256	HPJBU43	862058	266	242 - 295	670				S0152: 1 and L0589: 1.	18			
257	HPMBX22	702012	267	211 - 270	671				H0046: 16, L0362: 15, L0766: 11, L0754: 8, L0747: 4, L0731: 4, L0439: 3, S0212: 2,	11			



								S0406: 1, H0732: 1, L0748: 1, L0750: 1, L0779: 1, S0434: 1, S0106: 1, S0026: 1, H0423: 1 and H0422: 1.			
258	HPMCJ84	562779	268	83 - 199	672			H0031: 1	12p13,2		
259	HPMCV30	612870	269	52 - 195	673	Leu-39 to His-47.		L0526: 11, L0622: 8, H0670: 8, H0087: 7, S0360: 5, H0594: 5, H0188: 5, H0412: 5, S0206: 5, H0218: 4, S0418: 4, H0318: 4, H0024: 4, H0617: 4, L0770: 4, L0783: 4, S0328: 4, S0027: 4, H0265: 3, H0663: 3, T0048: 3, H0597: 3, H0123: 3, H0673: 3, S0366: 3, H0135: 3, H0616: 3, S0002: 3, L0775: 3, L0776: 3, L0518: 3, L0663: 3, H0144: 3, S0374: 3, S0126: 3, S0380: 3, S3014: 3, H0352: 3, H0624: 2, H0556: 2, H0219: 2, S0114: 2, H0657: 2, H0341: 2, S0110: 2, H0661: 2, H0305: 2, H0351: 2, H0492: 2, T0039: 2, H0052: 2, H0546: 2,	12p13,17		



									H0124: 1, H0163: 1, H0063: 1, H0551: 1, H0413: 1, H0102: 1, H0560: 1, S0372: 1, H0130: 1, S0144: 1, S0344: 1, S0422: 1, L0598: 1, L0507: 1, L0639: 1, L0648: 1, L0662: 1, L0767: 1, L0524: 1, L0805: 1, L0659: 1, L0542: 1, L0809: 1, L0530: 1, L0789: 1, H0691: 1, H0520: 1, H0519: 1, H0682: 1, H0684: 1, H0659: 1, H0658: 1, H0648: 1, H0672: 1, S0378: 1, S0152: 1, S0174: 1, H0576: 1, L0612: 1, H0540: 1, L0748: 1, L0740: 1, L0752: 1, L0758: 1, S0436: 1, L0485: 1, L0599: 1, L0608: 1, L0595: 1, L0362: 1, L0366: 1, S0106: 1, H0543: 1, S0446: 1, L0600: 1 and H0008: 1.					
260	HPMFH77	702014	270	251 - 358	674	Pro-29 to Cys-35.	L0750: 4, L0809: 3, L0747: 3, L0803: 2, L0776: 2, L0740: 2, L0754: 2, S0045: 1,	10						





									S0136: 1, H0696: 1, L0748: 1, L0747: 1, L0756: 1, L0779: 1, L0777: 1, L0731: 1, L0757: 1, S0434: 1, S0436: 1, S0011: 1, H0136: 1 and S0196: 1.			
262	HPTRM02	812879	272	885 - 1127	676	His-48 to Ser-61, Ala-66 to Val-72.			H0617: 7, H0087: 6, H0657: 5, S0410: 3, L0754: 3, S0356: 2, L0717: 2, H0150: 2, H0687: 2, H0424: 2, H0551: 2, L0769: 2, L0774: 2, L0743: 2, L0758: 2, L0592: 2, H0556: 1, T0002: 1, H0686: 1, H0685: 1, T0049: 1, H0663: 1, S0442: 1, S0444: 1, S0360: 1, S0476: 1, H0550: 1, H0486: 1, H0250: 1, L0021: 1, T0048: 1, S0474: 1, S0049: 1, H0052: 1, H0309: 1, H0597: 1, H0544: 1, H0014: 1, H0107: 1, S6028: 1, H0622: 1, H0644: 1, H0102: 1, S0038: 1, L0351: 1, S0450: 1, S0344: 1, S0002: 1, L0764: 1, L0766: 1,			

									L0805: 1, L0776: 1, L0655: 1, L0661: 1, L0657: 1, L0809: 1, L0666: 1, L0665: 1, L2652: 1, L2260: 1, L2261: 1, H0689: 1, H0435: 1, H0521: 1, H0696: 1, H0555: 1, L0744: 1, L0439: 1, L0749: 1, L0777: 1, L0755: 1, L0759: 1, S0436: 1, L0597: 1, L0599: 1, L0366: 1 and S0196: 1.			
263	HPWBA29	561956	273	194 - 235	677				S0044: 1	10		
264	HPWDK06	839825	274	405 - 485	678				H0717: 11, L0743: 11, 2 L0748: 10, L0731: 6, L0754: 5, H0427: 4, H0716: 3, H0575: 3, H0428: 3, H0031: 3, L3904: 3, L0517: 3, H0696: 3, S0044: 3, L0758: 3, H0411: 2, H0597: 2, H0620: 2, H0024: 2, H0687: 2, H0135: 2, L0770: 2, L0662: 2, L0775: 2, L0518: 2, L5622: 2, L0666: 2, H0144: 2, L0744: 2, L0751: 2, L0750: 2, S0436: 2, L0605: 2, H0713: 1,	2		





266	HRADF49	866481	276	169 - 930	680	Pro-85 to Asp-99, Arg-163 to Arg-170, Gln-183 to Thr-189, Pro-201 to Ser-209, Ser-216 to Gly-222.	L0659: 1, L2264: 1, S0126: 1, H0659: 1, H0670: 1, H0648: 1, H0710: 1, H0555: 1, S0028: 1, L0740: 1, L0750: 1, L0777: 1, L0752: 1, L0755: 1, L0731: 1, L0758: 1, L0759: 1, S0434: 1, S0436: 1, L0596: 1, L0588: 1, L0605: 1, L0590: 1, L0608: 1 and H0543: 1.	L0659: 1, L2264: 1, S0126: 1, H0659: 1, H0670: 1, H0648: 1, H0710: 1, H0555: 1, S0028: 1, L0740: 1, L0750: 1, L0777: 1, L0752: 1, L0755: 1, L0731: 1, L0758: 1, L0759: 1, S0434: 1, S0436: 1, L0596: 1, L0588: 1, L0605: 1, L0590: 1, L0608: 1 and H0543: 1.		
							H0618: 9, L0751: 7, L0754: 6, L0758: 6, H0253: 5, L0748: 5, L0439: 5, H0580: 3, L3816: 3, H0052: 3, L0770: 3, L0663: 3, H0556: 2, H0733: 2, H0351: 2, H0706: 2, H0567: 2, H0625: 2, S0142: 2, L0639: 2, L3905: 2, L0659: 2, L0543: 2, L5623: 2, L0749: 2, S0436: 2, H0423: 2, L3643: 1, H0381: 1, S0212: 1, H0254: 1, H0663: 1, H0638: 1, S0418: 1, H0741: 1, H0735: 1, S0045: 1, S0046: 1,	11,2		





									L0796: 1, L5565: 1, L0761: 1, L0643: 1, L0645: 1, L0662: 1, L0768: 1, L0794: 1, L0775: 1, L0375: 1, L0378: 1, L0655: 1, L0382: 1, L0793: 1, L0666: 1, L0663: 1, S0053: 1, S0374: 1, H0547: 1, H0658: 1, H0660: 1, H0651: 1, H0521: 1, S0406: 1, H0555: 1, H0436: 1, S0390: 1, S3014: 1, S0027: 1, L0743: 1, L0777: 1, L0731: 1, H0707: 1, S0436: 1, H0543: 1 and H0422: 1.			
268	HRADT25	800737	278	233 - 424	682	Gln-30 to Tyr-36, Thr-47 to Glu-56, Asn-58 to Thr-63.		H0555: 2 and S0356: 1.				
269	HRDAI17	560720	279	578 - 673	683			H0031: 2, L0758: 2, H0013: 1, H0124: 1, L0369: 1, L0792: 1, S0216: 1, L0745: 1 and L0753: 1.	13,17,19,2,4,5, 7,8			
270	HRDDQ39	840405	280	215 - 355	684	Gly-27 to Pro-35.		S0001: 2, H0436: 2, S0134: 1, H0657: 1, H0441: 1, H0009: 1, H0123: 1, H0050: 1, H0428: 1, H0124: 1, H0529: 1, H0521: 1 and	16			





272	HRDFK37	840381	282	120 - 152	686		L0366: 1. H0556: 4, L0731: 3, H0124: 2, L0766: 2, L0809: 2, L0747: 2, L0603: 2, S0218: 1, H0657: 1, S0116: 1, H0549: 1, H0550: 1, H0250: 1, H0253: 1, H0052: 1, H0083: 1, H0355: 1, L0483: 1, H0181: 1, H0617: 1, H0032: 1, S0364: 1, H0264: 1, H0100: 1, H0494: 1, L0065: 1, L0770: 1, L0769: 1, L0772: 1, L0764: 1, L0662: 1, L0768: 1, L0387: 1, L0657: 1, L0658: 1, L0541: 1, S0052: 1, S0374: 1, L0565: 1, H0547: 1, S0406: 1, H0478: 1, L0740: 1, L0779: 1, L0757: 1, L0759: 1, H0444: 1, H0445: 1, L0592: 1 and L0595: 1.	1		
273	HRGBD54	828436	283	1958 - 1990	687		L0438: 4, T0049: 2, H0251: 2, H0050: 2, L0483: 2, H0551: 2, H0413: 2, L0748: 2, L0755: 2, L0599: 2, H0170: 1, H0650: 1,	2		

									H0657: 1, S0212: 1, H0662: 1, H0402: 1, S0444: 1, S0132: 1, L0717: 1, H0574: 1, H0013: 1, H0156: 1, H0599: 1, H0581: 1, L0471: 1, H0011: 1, H0024: 1, H0266: 1, S0250: 1, S0214: 1, T0067: 1, L0065: 1, L0796: 1, L0764: 1, L0794: 1, L0766: 1, L0659: 1, L0666: 1, H0144: 1, H0547: 1, H0519: 1, H0593: 1, H0134: 1, S3014: 1, L0744: 1, L0747: 1, L0758: 1, S0434: 1 and H0543: 1.			
274	HSAVA08	580870	284	66 - 146	688	Thr-15 to Gln-22.	S0114: 2	16				
275	HSAWN53	634697	285	159 - 347	689	Gln-42 to Ser-63.	S0114: 1					
276	HSAWZ40	634000	286	124 - 237	690		S0114: 1	8				
277	HSDZM54	637870	287	445 - 552	691	Lys-17 to Leu-23.	H0455: 1					
278	HSHAX04	812178	288	42 - 215	692		L0731: 6, H0265: 4, L0483: 4, H0424: 4, H0253: 3, H0318: 3, L0769: 3, L0774: 3, L0776: 3, S0037: 3, L0742: 3, L0750: 3, L0755: 3, S0360: 2, H0581: 2, H0266: 2, H0213: 2, H0124: 2,	1				





280	HSKDR27	580874	290	473 - 556	694	Pro-18 to Gly-26.	L0751: 1, L0756: 1, L0779: 1, L0731: 1, L0758: 1, H0653: 1 and H0352: 1. S0027: 95, S0192: 54, S3014: 53, S0126: 42, S0040: 35, H0424: 23, S0028: 22, S0037: 19, S3012: 16, H0213: 13, T0006: 12, H0250: 11, S0032: 11, L0744: 11, T0040: 10, H0124: 10, H0429: 10, L0740: 10, L0588: 10, L0754: 9, H0545: 8, H0280: 8, S0194: 8, S0196: 7, H0392: 6, T0039: 6, H0150: 6, H0039: 6, S0206: 6, L0743: 6, L0731: 6, S0342: 5, S0212: 5, S0045: 5, H0486: 5, H0575: 5, H0014: 5, H0090: 5, H0551: 5, H0100: 5, S0044: 5, S0011: 5, H0255: 4, H0318: 4, H0271: 4, S0022: 4, H0031: 4, H0181: 4, H0032: 4, H0038: 4, T0067: 4, S0124: 4, L0747: 4, L0749: 4, H0402: 3, H0309: 3,	19		
-----	---------	--------	-----	-----------	-----	-------------------	--	----	--	--







282	HSLHX15	777861	292	485 - 610	696	Arg-28 to Arg-35.	S0028: 3, L0744: 3, L0662: 2, L0803: 2, L0809: 2, L3811: 2, L0751: 2, L0779: 2, L0362: 2, H0739: 1, H0624: 1, H0713: 1, S0024: 1, H0733: 1, S0220: 1, T0039: 1, L3655: 1, H0156: 1, L0021: 1, L0471: 1, H0644: 1, H0032: 1, H0316: 1, H0488: 1, H0641: 1, L0638: 1, L0641: 1, L0774: 1, L0776: 1, L0807: 1, L0636: 1, L0787: 1, L0789: 1, L0790: 1, H0144: 1, H0726: 1, H0478: 1, S3012: 1, S0206: 1, L0439: 1, L0749: 1, L0750: 1, L0758: 1, L0599: 1 and S0242: 1.	12,15,3,X	
283	HSNAP85	784054	293	941 - 955	697		T0040: 1, L0564: 1, S0028: 1 and L0480: 1.  L0105: 11, L0754: 10, L0803: 9, L0777: 8, L0740: 6, L0770: 4, L0649: 4, L0805: 4, L0731: 4, S0212: 3, L0766: 3, L0752: 3, L0599: 3, H0265: 2,	12q24	



									L0658: 1, L0634: 1, L0809: 1, S0374: 1, L3824: 1, L3826: 1, H0435: 1, H0660: 1, H0672: 1, S0378: 1, H0754: 1, H0576: 1, S0390: 1, S3014: 1, S0206: 1, L0747: 1, L0758: 1, L0608: 1, S0026: 1, S0194: 1 and H0506: 1.			
284	HSNAZ09	527221	294	164 - 208	698	Ser-6 to Ser-14.			H0163: 1 and L0748: 1.			
285	HSOAH16	827058	295	206 - 334	699	Pro-2 to Arg-7, Trp-32 to Leu-38.			H0343: 1			
286	HSQBF66	560726	296	229 - 429	700				S0026: 1			
287	HSQES57	831222	297	195 - 989	701	Thr-76 to Thr-81, Asp-87 to Glu-94, Gln-100 to Ser-106, Arg-135 to Pro-143, Tyr-236 to Ser-244.			L0751: 4, L0747: 4, L0769: 3, L0662: 3, L0809: 3, L0748: 3, H0624: 2, H0618: 2, H0050: 2, L0770: 2, L0764: 2, L0766: 2, L0744: 2, H0352: 2, H0686: 1, S0040: 1, S0114: 1, H0657: 1, S0116: 1, L0988: 1, S0444: 1, H0586: 1, H0587: 1, H0013: 1, H0123: 1, S0250: 1, H0166: 1, S0438: 1, S0440: 1, L0639: 1, L0643: 1, L0771: 1, L0521: 1, L0803: 1,			

									L0774: 1, L0379: 1, L0807: 1, L0783: 1, L5623: 1, S0374: 1, L3660: 1, H0593: 1, S0404: 1, S0406: 1, L0743: 1, L0750: 1, L0777: 1, L0753: 1, L0757: 1, L0758: 1, L0599: 1, S0026: 1 and L2842: 1.			
288	HSRBE06	871264	298	128 - 193	702				S0011: 3, H0306: 1, H0402: 1, L0004: 1, H0486: 1, H0050: 1, S0051: 1, H0494: 1 and S0002: 1.	21		
289	HSRFD18	840771	299	67 - 153	703				L0754: 10, S0422: 5, S0022: 4, L0803: 4, L0748: 4, L0747: 4, L0591: 4, H0486: 3, L0766: 3, L0805: 3, L0526: 3, L0665: 3, S0434: 3, S0212: 2, S0444: 2, S0360: 2, S0222: 2, L3816: 2, H0013: 2, H0596: 2, L0471: 2, H0166: 2, H0591: 2, H0509: 2, L0646: 2, L0662: 2, L0659: 2, L0666: 2, L0664: 2, S0374: 2, L0779: 2, L0777: 2, L0759: 2, S0436: 2,	1		

									H0624: 1, H0170: 1, S0114: 1, S0001: 1, H0671: 1, H0663: 1, H0402: 1, H0305: 1, S0442: 1, S0408: 1, H0329: 1, H0742: 1, L3387: 1, H0581: 1, H0421: 1, H0194: 1, H0263: 1, H0597: 1, H0569: 1, H0355: 1, H0510: 1, H0179: 1, H0687: 1, H0615: 1, L0483: 1, H0553: 1, H0644: 1, H0673: 1, H0674: 1, H0100: 1, S0450: 1, H0714: 1, L0763: 1, L0770: 1, L0761: 1, L0649: 1, L0776: 1, L0518: 1, L0790: 1, L0791: 1, L0792: 1, L0663: 1, H0547: 1, H0670: 1, H0521: 1, H0696: 1, S0406: 1, H0555: 1, H0478: 1, L0780: 1, H0707: 1, S0276: 1 and H0543: 1.				
290	HSSDI26	560722	300	253 - 318	704				H0135: 1				
291	HSSEA64	853395	301	58 - 246	705				H0052: 17, L0745: 11, L0748: 10, L0777: 8, L0755: 8, H0547: 7, L0439: 7, L0766: 6,	12p13			





					L0731: 2, H0395: 1, H0295: 1, H0294: 1, H0657: 1, H0656: 1, H0341: 1, H0484: 1, H0663: 1, H0638: 1, S0356: 1, S0444: 1, H0741: 1, L3271: 1, H0549: 1, H0550: 1, H0370: 1, H0455: 1, H0632: 1, H0486: 1, T0039: 1, T0112: 1, H0156: 1, H0581: 1, H0052: 1, H0545: 1, H0046: 1, H0150: 1, H0081: 1, S0051: 1, H0107: 1, H0061: 1, H0188: 1, H0288: 1, S0250: 1, H0428: 1, H0135: 1, H0163: 1, H0090: 1, H0616: 1, T0004: 1, S0438: 1, L0770: 1, L0796: 1, L0637: 1, L0772: 1, L0372: 1, L0646: 1, L0521: 1, L0768: 1, L0766: 1, L5574: 1, L0774: 1, L0775: 1, L0375: 1, L0806: 1, L0776: 1, L0807: 1, L0657: 1, L0658: 1, L0540: 1, L0384: 1, L0809: 1, L0663: 1,	
--	--	--	--	--	--	--



								L0438: 1, H0672: 1, H0754: 1, S0188: 1, S0406: 1, H0436: 1, H0576: 1, S014: 1, L0748: 1, L0779: 1, L0757: 1 and H0506: 1.			
293	HSSFE38	742512	303	264 - 641	707			Glu-37 to Arg-42, Gly-108 to Cys-117.			
294	HSSGJ58	747714	304	245 - 361	708			Thr-14 to Gln-34.	L0749: 2, H0135: 1, L0558: 1 and L0748: 1.	1	
295	HSWBE76	751308	305	380 - 559	709				L0777: 4, L0751: 3, L0747: 3, L0648: 2, L0779: 2, L0753: 2, S0342: 1, H0484: 1, H0661: 1, S0358: 1, L0009: 1, H0411: 1, S6014: 1, H0546: 1, H0123: 1, H0188: 1, S0366: 1, H0413: 1, S0344: 1, H0529: 1, L0769: 1, L0627: 1, L0774: 1, L0378: 1, L0776: 1, L0655: 1, L0663: 1, S0380: 1, H0478: 1, L0743: 1, L0750: 1 and S0196: 1.		
296	HSXCP38	895392	306	211 - 255	710				L0439: 3, L3655: 1, H0050: 1, T0010: 1, S0036: 1, L0438: 1 and L0759: 1.		
297	HSYBI06	740766	307	232 - 333	711				H0159: 2, H0663: 2, H0024: 2, H0059: 2,	1	

									H0543: 2, H0556: 1, H0222: 1, L3643: 1, H0255: 1, H0431: 1, T0039: 1, H0599: 1, S0010: 1, T0048: 1, H0251: 1, H0266: 1, H0032: 1, H0551: 1, H0100: 1, S0015: 1, S0370: 1, H0743: 1, L0369: 1, L0627: 1, L0519: 1, L0663: 1, L0665: 1, H0691: 1, H0696: 1, H0627: 1, S0028: 1, L0744: 1, L0740: 1, L0777: 1, S0434: 1, L0588: 1, L0604: 1 and H0422: 1.			
298	HT3BF49	838620	308	306 - 320	712				H0271: 2, L0791: 2, L0439: 2, H0159: 1, H0561: 1, L0774: 1, S0052: 1 and L0779: 1.	6		
299	HT5GR59	801930	309	135 - 230	713				H0584: 36, H0585: 22, H0141: 11, H0167: 9, H0457: 7, H0521: 6, S0474: 4, H0575: 3, L0731: 3, H0265: 2, H0556: 2, H0581: 2, L0761: 2, H0543: 2, H0140: 1, H0638: 1, S0358: 1, S0140: 1, H0747: 1, H0619: 1, H0497: 1, H0559: 1,			

									H0069: 1, H0635: 1, H0427: 1, S0280: 1, H0252: 1, H0477: 1, L0667: 1, L0768: 1, L0775: 1, L0659: 1, L0791: 1, L0792: 1, S0053: 1, L0777: 1, L0758: 1, H0445: 1 and H0506: 1.			
300	HTAEI78	637684	310	632 - 646	714				H0069: 1, S0474: 1 and L0766: 1.			
301	HTDAA78	566861	311	151 - 213	715				H0477: 1			
302	HTECB02	806305	312	196 - 366	716				S0358: 3, H0253: 3, T0010: 3, L0806: 3, L0747: 3, L0749: 3, H0265: 2, H0663: 2, H0036: 2, H0618: 2, L0764: 2, L5623: 2, L0666: 2, H0521: 2, L0759: 2, L0591: 2, L0604: 2, H0556: 1, S0114: 1, L0443: 1, S0408: 1, H0619: 1, S0222: 1, H0559: 1, T0039: 1, S0280: 1, L0021: 1, H0706: 1, H0196: 1, H0052: 1, H0545: 1, H0009: 1, H0172: 1, H0123: 1, H0024: 1, H0014: 1, S0388: 1, H0239: 1, H0428: 1, H0181: 1,			

									H0708: 1, H0591: 1, H0038: 1, S0002: 1, L0796: 1, L3905: 1, L0761: 1, L0646: 1, L0766: 1, L0381: 1, L0803: 1, L0774: 1, L0775: 1, L0807: 1, L0517: 1, L0783: 1, L0384: 1, L0809: 1, L0545: 1, L5622: 1, L0788: 1, L0664: 1, L0447: 1, H0658: 1, S0027: 1, L0743: 1, L0744: 1, L0751: 1, L0754: 1, L0745: 1, L0746: 1, L0750: 1, L0752: 1, L0755: 1, L0758: 1, S0434: 1, H0665: 1 and H0542: 1.				
303	HTEDF18	635528	313	325 - 342	717				L0758: 6, L0794: 5, L0779: 4, H0038: 2, L0662: 1, L0805: 1, L0790: 1 and L0791: 1.	10			
304	HTEDJ28	762845	314	287 - 424	718	Thr-34 to Leu-41.			L0747: 9, L0439: 8, L0809: 6, L0766: 5, L0750: 5, L0758: 5, L0740: 4, L0752: 4, L0731: 4, L0662: 3, H0547: 3, L0779: 3, L0777: 3, L0757: 3, H0375: 2, L0646: 2, L0774: 2, L0783: 2,	11			

									H0144: 2, L0759: 2, S0442: 1, H0333: 1, T0060: 1, H0327: 1, H0399: 1, L0483: 1, H0038: 1, L0564: 1, S0382: 1, H0538: 1, H0743: 1, L0763: 1, L0638: 1, L0765: 1, L0771: 1, L0649: 1, L0522: 1, L0775: 1, L0655: 1, L0659: 1, L0792: 1, L0663: 1, L0438: 1, H0648: 1, L0756: 1, L0753: 1, L0596: 1, L0590: 1, L0592: 1, L0608: 1, H0423: 1 and S0460: 1.			
305	HTEEW69	764835	315	182 - 1153	719	Asp-63 to Thr-70, Asn-77 to Ser-86, Thr-101 to Arg-108, Pro-117 to Asn-123, Gly-194 to Trp-203.		H0038: 8, H0616: 4, L0779: 3, L0758: 3, L0753: 2, L0032: 1, T0006: 1, H0040: 1, L0768: 1 and H0547: 1.				
306	HTEGS07	827700	316	493 - 606	720	Pro-18 to Asn-27.		L0804: 2, L0747: 2, L0485: 2, L0604: 2, L0623: 1, H0708: 1, S0366: 1, H0038: 1, L0794: 1, L0775: 1 and L0779: 1.				
307	HTEGS11	862066	317	173 - 196	721			L0748: 8, L0598: 4, L0747: 4, L0770: 3, L0750: 3, L0756: 3, H0645: 2, H0619: 2,	5			

308	HTEHU59	840385	318	170 - 274	722	Ser-29 to Phe-34.	L0794: 2, L0666: 2, L0439: 2, L0749: 2, L0777: 2, L0731: 2, H0170: 1, S0040: 1, H0713: 1, H0486: 1, H0196: 1, L0471: 1, H0038: 1, L0769: 1, L0637: 1, L0761: 1, L0772: 1, L0766: 1, L0775: 1, L0367: 1, L0789: 1, L0793: 1, H0144: 1, H0547: 1, L0758: 1 and L0581: 1.			
							S0422: 6, H0038: 4, L0758: 4, L0754: 3, S0360: 2, H0024: 2, L0598: 2, L0766: 2, L0748: 2, L0747: 2, L0756: 2, H0583: 1, H0341: 1, S0418: 1, L0005: 1, H0741: 1, H0437: 1, H0369: 1, H0581: 1, H0194: 1, S0050: 1, H0271: 1, H0428: 1, T0006: 1, H0068: 1, H0412: 1, H0056: 1, H0494: 1, S0426: 1, L0772: 1, L0646: 1, L0662: 1, L0803: 1, L0806: 1, L0776: 1, L0655: 1, L0789: 1, L0792: 1,	II		



									S0388: 1, H0266: 1, H0591: 1, H0087: 1, H0413: 1, H0561: 1, S0438: 1, S0422: 1, L0520: 1, L0769: 1, L0794: 1, L0775: 1, L0666: 1, L0663: 1, H0547: 1, S0152: 1, L0740: 1, L0777: 1, L0753: 1, L0758: 1, L0608: 1 and H0542: 1.			
311	HTGBK95	834490	321	271 - 321	725				L0777: 5, S0444: 3, L0766: 3, L0803: 3, L0439: 3, S0360: 2, L0598: 2, L0666: 2, L0748: 2, T0049: 1, S0134: 1, S0116: 1, S0408: 1, L0717: 1, H0586: 1, H0486: 1, H0575: 1, H0510: 1, H0553: 1, H0560: 1, S0422: 1, L0763: 1, L0769: 1, L0521: 1, L0767: 1, L0768: 1, L0775: 1, L0663: 1, S0374: 1, L0438: 1, H0520: 1, H0682: 1, S0328: 1, S0406: 1, L0740: 1, S0192: 1 and H0543: 1.			
312	HTLAP64	603913	322	173 - 235	726	Ile-8 to Asn-20.			L0803: 7, L0756: 6, S0422: 4, L0794: 4,	11		





313	HTLBT80	840045	323	912 - 1301	727	Ser-107 to Ser-116.	S0406: 1, S0028: 1, L0740: 1, L0745: 1, L0747: 1, L0750: 1, L0779: 1, S0436: 1, L0587: 1, L0597: 1, L0591: 1, S0026: 1, L0097: 1 and S0242: 1. L0659: 6, H0556: 4, H0521: 4, L0439: 4, L0745: 4, L0759: 4, H0657: 3, S0360: 3, L0761: 3, L0662: 3, L0766: 3, L0809: 3, H0549: 2, H0392: 2, H0253: 2, H0581: 2, H0620: 2, H0051: 2, H0551: 2, H0494: 2, L0770: 2, L0794: 2, L0649: 2, L0665: 2, H0520: 2, S0032: 2, L0741: 2, L0743: 2, L0748: 2, L0747: 2, L0779: 2, L0758: 2, L0605: 2, H0650: 1, H0484: 1, H0254: 1, H0402: 1, S0358: 1, H0580: 1, H0741: 1, S0007: 1, S0132: 1, S0476: 1, H0393: 1, H0369: 1, H0550: 1, H0409: 1, H0256: 1, H0250: 1, H0042: 1,	20	
-----	---------	--------	-----	------------	-----	---------------------	---	----	--

									H0036: 1, H0318: 1, S0049: 1, H0050: 1, H0014: 1, H0375: 1, S6028: 1, H0266: 1, H0292: 1, H0428: 1, H0622: 1, H0031: 1, H0617: 1, L0456: 1, H0135: 1, H0040: 1, H0379: 1, H0264: 1, H0056: 1, H0623: 1, H0100: 1, H0633: 1, S0002: 1, H0529: 1, L0762: 1, L5575: 1, L0772: 1, L0646: 1, L0771: 1, L0773: 1, L0767: 1, L0768: 1, L0803: 1, L0805: 1, L0653: 1, L5622: 1, L4501: 1, L0666: 1, H0689: 1, H0690: 1, H0682: 1, H0670: 1, H0522: 1, S0044: 1, H0436: 1, S0027: 1, L0754: 1, L0749: 1, L0753: 1, L0731: 1, S0436: 1, H0653: 1, S0192: 1, H0542: 1, H0543: 1, H0423: 1 and S0424: 1.					
314	HTLDA84	686397	324	225 - 266	728				H0253: 1					
315	HTLDN29	790195	325	175 - 276	729				L0766: 7, L0731: 4, H0529: 3, L0769: 3,					



									H0660: 1, H0539: 1, H0521: 1, H0774: 1, H0134: 1, S0390: 1, L0439: 1, L0754: 1, L0747: 1, L0779: 1, L0755: 1, L0757: 1, H0445: 1, S0434: 1, L0596: 1, L0592: 1, L0599: 1, L0593: 1 and H0543: 1.			
316	HTLDU78	637702	326	219 - 245	730				L0758: 3, H0253: 1 and L0779: 1.	19		
317	HTLEC82	811992	327	530 - 640	731				L0766: 29, H0618: 13, H0253: 13, L0758: 10, L0754: 9, L0731: 8, L0750: 7, L0756: 6, L0761: 5, L0744: 5, L0748: 5, L0747: 5, L0759: 5, L0763: 4, L0769: 4, L0662: 4, L0741: 4, H0024: 3, H0641: 3, L0770: 3, L0800: 3, L0775: 3, H0521: 3, L0755: 3, S0418: 2, S0046: 2, S0476: 2, H0250: 2, H0052: 2, H0620: 2, H0266: 2, H0271: 2, H0188: 2, L0783: 2, L0809: 2, L0792: 2, H0689: 2, L0751: 2, L0757: 2, L0603: 2,	19,5,UL		



318	HTLEM16	779133	328	1220 - 1429	732	Arg-29 to Cys-43.	L0768: 1, L0794: 1, L0650: 1, L0651: 1, L0784: 1, L0378: 1, L0776: 1, L0807: 1, L0528: 1, L0790: 1, L0793: 1, L0666: 1, S0374: 1, H0693: 1, H0547: 1, H0593: 1, H0672: 1, S0152: 1, H0555: 1, S0027: 1, L0742: 1, L0439: 1, L0780: 1, S0436: 1, L0596: 1, H0543: 1 and H0352: 1.		
							L0439: 31, L0741: 24, H0056: 13, L0748: 12, H0052: 9, H0521: 9, L0776: 8, L0744: 8, L0438: 7, L0754: 7, S0474: 6, L0766: 6, L0742: 6, L0731: 6, L0750: 5, S0278: 4, L5566: 4, L0665: 4, H0522: 4, H0556: 3, H0716: 3, H0657: 3, S0358: 3, H0580: 3, H0599: 3, S0049: 3, H0009: 3, H0553: 3, H0641: 3, S0142: 3, L0764: 3, L0659: 3, L0666: 3, S0126: 3, L0751: 3, H0717: 2,		







									H0660: 1, S0152: 1, H0696: 1, S0406: 1, H0555: 1, H0436: 1, S3014: 1, L0743: 1, L0745: 1, L0747: 1, L0749: 1, L0756: 1, L0753: 1, L0755: 1, H0445: 1, S0436: 1, L0485: 1, H0667: 1, H0216: 1, H0543: 1, H0422: 1 and H0008: 1.			
319	HTLEV48	723799	329	205 - 825	733	Met-1 to Arg-12, Thr-19 to Leu-27, Asp-72 to Val-79, Arg-89 to Pro-94, Lys-102 to Ser-111, Glu-116 to Arg-122, Lys-134 to Pro-142, Ser-146 to Ser-151, Gly-177 to Asp-196.	S0366: 4, L0623: 1 and H0253: 1.	22				
	HTLEV48	566786	393	91 - 120	797							
320	HTLFI73	846063	330	340 - 411	734		H0253: 2, H0305: 1, T0109: 1 and H0618: 1.					
321	HTNAM63	566880	331	193 - 285	735		L0439: 6, T0067: 1 and L0438: 1.	6				
322	HTNBK13	831967	332	534 - 599	736		L0779: 5, L0731: 4, L0593: 4, H0046: 3, L0776: 3, L0666: 3, H0031: 2, L0772: 2, L0774: 2, L0805: 2, H0670: 2, L0439: 2, L0754: 2, L0777: 2,					

								L0758: 2, L0590: 2, T0002: 1, L0717: 1, H0632: 1, L0622: 1, T0082: 1, H0581: 1, H0263: 1, T0115: 1, H0597: 1, L0471: 1, H0012: 1, H0620: 1, H0163: 1, T0067: 1, L0770: 1, L0637: 1, L0388: 1, L0657: 1, L0382: 1, L0664: 1, S0126: 1, H0660: 1, S0378: 1, H0521: 1, L0747: 1, L0750: 1, L0756: 1, L0752: 1, L0755: 1, L0759: 1, S0031: 1, L0599: 1 and L0603: 1.			
323	HTOAI50	638623	333	61 - 144	737			S0442: 1, L3388: 1, H0264: 1 and L0766: 1.	17		
324	HTOAM11	664508	334	89 - 193	738			S0010: 1 and H0264: 1.	11,X		
325	HTODH57	823126	335	228 - 443	739		Tyr-21 to Phe-26, Glu-58 to Trp-66.	H0264: 1	20		
326	HTODH83	580884	336	103 - 201	740			H0264: 1	10		
327	HTODN35	570901	337	67 - 111	741			H0264: 1			
328	HTOEV16	853616	338	201 - 557	742		Arg-60 to Ala-69, Ala-93 to Cys-99.	H0506: 66, H0555: 28, S0354: 20, H0264: 18, H0087: 17, H0581: 16, S0116: 15, H0486: 13, H0040: 12, H0063: 12, S0358: 10, H0597: 8, H0039: 7, H0488: 6,			





									L0771: 1, L0661: 1, L0809: 1, L0790: 1, L0792: 1, L0663: 1, L0665: 1, S0374: 1, H0547: 1, H0519: 1, H0593: 1, H0672: 1, H0518: 1, H0521: 1, H0555: 1, H0436: 1, L0439: 1, L0779: 1, L0731: 1 and L0757: 1.			
332	HTSFJ32	637720	342	93 - 149	746	Leu-12 to Cys-18.			H0556: 1, S0114: 1, H0087: 1, H0538: 1, H0695: 1 and L0774: 1.			
333	HTTDN24	766485	343	1024 - 1728	747	Asp-194 to Leu-199, Ile-206 to Pro-211, Glu-224 to Ser-229.						
334	HTTEE41	840950	344	1171 - 1197	748				H0040: 17, H0251: 14, L0758: 10, L0748: 8, L0731: 8, H0494: 7, L0666: 7, H0144: 7, H0659: 7, L0747: 7, L0749: 7, L0757: 7, H0038: 6, H0529: 6, L0770: 6, L0662: 6, L0659: 6, H0013: 5, H0318: 5, H0616: 5, S0440: 5, L0775: 5, L0776: 5, H0519: 5, L0588: 5, L0592: 5, H0341: 4, S0360: 4, H0412: 4, L0663: 4, H0547: 4, L0754: 4,	12		









									L0636: 1, L0518: 1, L0782: 1, L0382: 1, L0809: 1, L3391: 1, L2263: 1, L2259: 1, L2262: 1, L0565: 1, H0693: 1, L3827: 1, H0520: 1, S0126: 1, H0689: 1, H0670: 1, H0660: 1, H0666: 1, H0648: 1, L0602: 1, H0710: 1, H0518: 1, S0176: 1, H0134: 1, H0555: 1, H0436: 1, H0478: 1, H0631: 1, L0779: 1, L0752: 1, S0434: 1, L0605: 1, L0591: 1, L0599: 1, H0665: 1, S0196: 1, L2368: 1, H0008: 1 and H0352: 1.					
335	HTXBD09	839429	345	350 - 388	749				L0439: 9, L0751: 7, L0662: 3, L0766: 3, L0665: 3, L0757: 3, S0007: 2, H0050: 2, L0770: 2, L0769: 2, L0764: 2, L0774: 2, L0776: 2, L0663: 2, S0053: 2, L0750: 2, L0756: 2, L0731: 2, L0601: 2, H0265: 1, S0116: 1, H0661: 1, L0717: 1, L0622: 1,					

336	HTXDB22	853407	346	229 - 297	750			H0486: 1, H0545: 1, H0150: 1, H0553: 1, L0055: 1, H0038: 1, H0634: 1, H0413: 1, S0438: 1, S0144: 1, L0520: 1, L0762: 1, L0763: 1, L0363: 1, L0654: 1, L0783: 1, L0809: 1, L0664: 1, H0435: 1, H0753: 1, H0555: 1, L0740: 1, L0747: 1, L0749: 1, L0777: 1, L0758: 1, L0597: 1 and L0595: 1.  H0271: 16, S0422: 15, 6 L0777: 11, H0179: 10, L0766: 9, S0360: 8, H0521: 7, L0752: 7, H0584: 6, H0457: 6, H0423: 6, S0356: 5, S0474: 5, L0770: 5, L0776: 5, H0659: 5, L0748: 5, L0779: 5, H0749: 4, H0581: 4, H0617: 4, L0521: 4, L0655: 4, L0663: 4, S0328: 4, L0754: 4, L0749: 4, L0756: 4, S0242: 4, H0265: 3, H0585: 3, S0418: 3, S0444: 3, H0747: 3, H0674: 3, S0426: 3,		
-----	---------	--------	-----	-----------	-----	--	--	---	--	--





337	HTXDC38	801935	347	359 - 415	751			L0805: 1, L0657: 1, L0635: 1, L0526: 1, L0809: 1, L0532: 1, L0664: 1, S0428: 1, S0053: 1, L3827: 1, H0520: 1, H0547: 1, H0690: 1, H0682: 1, H0672: 1, S0378: 1, H0696: 1, H0694: 1, H0134: 1, S0406: 1, H0436: 1, H0576: 1, H0479: 1, H0627: 1, H0631: 1, L0740: 1, L0745: 1, L0757: 1, L0758: 1, S0031: 1, H0343: 1, S0436: 1, L0605: 1, L0592: 1, L0485: 1, S0011: 1, H0136: 1, S0196: 1, H0542: 1, L0698: 1, S0460: 1, H0506: 1, L3630: 1 and H0352: 1.			
								S0406: 9, L0755: 6, L0769: 4, H0009: 3, H0012: 3, L0783: 3, L0749: 3, L0750: 3, L0779: 3, L0731: 3, S0442: 2, S0376: 2, S0410: 2, S0051: 2, H0606: 2, H0100: 2, S0440: 2, L0638: 2, L0665: 2, S0028: 2,	16		



338	HTXDC77	844258	348	65 - 520	752		S0344: 14, S0212: 4, S0372: 4, H0555: 4, H0581: 3, S0376: 2, H0597: 2, H0265: 1, S0360: 1, S0222: 1, H0046: 1, H0264: 1, S0370: 1, S0144: 1, S0142: 1, H0521: 1 and S0027: 1.	6	
339	HTXDD61	853408	349	49 - 447	753	Pro-70 to Ser-89, Ser-92 to Ser-115.	H0556: 11, H0052: 11, L0748: 10, L0439: 10, L0809: 9, H0265: 7, H0618: 7, L0764: 6, L0805: 6, L0769: 5, L0777: 5, L0758: 5, H0253: 4, L0601: 4, S0358: 3, H0251: 3, H0617: 3, S0438: 3, L5565: 3, L3905: 3, S0152: 3, S0206: 3, L0747: 3, H0445: 3, H0542: 3, H0341: 2, S0420: 2, L0717: 2, L3388: 2, H0550: 2, H0559: 2, H0620: 2, H0428: 2, H0135: 2, H0087: 2, T0041: 2, H0494: 2, L0648: 2, L0766: 2, L0774: 2, L0368: 2, L0787: 2, L0666: 2, L0665: 2, H0520: 2, H0547: 2,	17	









								L0775: 1, L0806: 1, L0559: 1, L0783: 1, L0383: 1, L5623: 1, H0698: 1, S0374: 1, H0520: 1, H0519: 1, S0292: 1, S0126: 1, H0682: 1, S0380: 1, H0696: 1, S0027: 1, L0740: 1, L0731: 1, H0445: 1, L0605: 1, L0592: 1 and H0543: 1.			
341	HTXET11	581521	351	178 - 267	755			H0265: 1 and S0442: 1.			
342	HTXJD85	840391	352	211 - 306	756			H0556: 2, L0638: 1, L0748: 1 and L0439: 1.	3		
343	HTXJY08	637774	353	108 - 158	757			H0556: 1, S0442: 1, H0036: 1, H0590: 1, H0024: 1, H0100: 1, L0769: 1, L0667: 1, L0438: 1, L0740: 1 and L0777: 1.	17		
344	HTXJMZ07	834881	354	319 - 432	758	Pro-19 to Ser-28.		L0439: 6, H0556: 3, S0007: 2, H0253: 2, L0744: 2, L0740: 2, L0731: 2, H0583: 1, H0656: 1, S0442: 1, H0069: 1, L0021: 1, H0618: 1, H0581: 1, H0041: 1, H0488: 1, L0770: 1, L0800: 1, L0766: 1, L0803: 1, L0375: 1, L0807: 1, L0382: 1, L0791: 1,			

									L0793: 1, L0352: 1, S0432: 1, L0741: 1 and L0779: 1.			
345	HUFCL31	801938	355	287 - 367	759				L0764: 5, L0771: 5, H0506: 4, L0374: 3, S0434: 3, S0356: 1, S0410: 1, H0264: 1, L0372: 1, L0783: 1, L0532: 1 and L0663: 1.	15		
346	HUKDF20	566823	356	214 - 315	760				H0261: 1, H0266: 1 and H0059: 1.			
347	HUKDY82	570896	357	187 - 285	761				S0053: 4, H0556: 3, H0673: 3, H0618: 2, H0083: 2, H0179: 2, H0674: 2, S0216: 2, T0002: 1, S0134: 1, S0116: 1, L3645: 1, H0550: 1, H0409: 1, H0069: 1, H0427: 1, H0271: 1, H0090: 1, H0634: 1, H0059: 1, S0052: 1, S0428: 1, H0144: 1, S0152: 1, H0576: 1 and S0031: 1.			
348	HUSCJ14	894699	358	74 - 661	762			Phe-166 to Arg-174, Ser-191 to Tyr-196.	L2654: 6, L0741: 4, S0192: 4, H0677: 4, H0556: 3, H0013: 3, H0052: 3, L0766: 3, L0744: 3, L0439: 3, L0757: 3, H0265: 2, S0040: 2, S0410: 2, H0599: 2, H0545: 2,			



								H0593: 1, H0435: 1, H0521: 1, H0555: 1, L0743: 1, L0754: 1, L0779: 1, L0752: 1, S0031: 1, S0436: 1, L0596: 1, L0605: 1, L0601: 1, S0106: 1, H0667: 1, S0276: 1 and L3576: 1.			
349	HUSGL67	792637	359	350 - 493	763	Met-1 to Tyr-8, Gln-27 to Gln-38.		S0358: 2, S0116: 1, S0360: 1, S0045: 1, H0497: 1, H0486: 1, H0250: 1, S0010: 1, S0474: 1, H0266: 1, H0271: 1, T0006: 1, H0412: 1, L3815: 1, L0766: 1, L2258: 1, H0710: 1, H0518: 1, S3014: 1 and H0543: 1.			
350	HUSGU40	684975	360	500 - 640	764	Arg-21 to Ser-27, Ile-36 to Asp-41.				12, 15, 3	
351	HUSIR18	762858	361	83 - 151	765			L0748: 4, H0622: 3, L0777: 3, H0624: 2, H0013: 2, H0520: 2, H0539: 2, L0439: 2, L0754: 2, L0747: 2, L0757: 2, L0758: 2, L0593: 2, L0002: 1, H0664: 1, H0580: 1, S0007: 1, H0497: 1, H0333: 1, H0599: 1, H0581: 1, L0483: 1,		12, 13, 15, 2, 6	

									H0598: 1, H0040: 1, H0412: 1, L0351: 1, T0041: 1, L0769: 1, L0771: 1, L0662: 1, L0767: 1, L0768: 1, L0766: 1, L0381: 1, L0806: 1, L0656: 1, L0659: 1, L0809: 1, L0663: 1, L0665: 1, H0672: 1, S0152: 1, L0740: 1, L0749: 1, L0750: 1, L0779: 1, L0752: 1, L0480: 1, L0591: 1 and H0543: 1.			
352	HUVDJ48	564853	362	196 - 213	766				H0393: 1, H0056: 1 and L0662: 1.			
353	HWAAl12	830432	363	223 - 312	767				L0794: 10, H0251: 9, H0547: 9, L0439: 8, L0731: 8, L0747: 7, L0438: 6, H0351: 5, L0750: 5, S0356: 4, L0769: 4, L0768: 4, L0766: 4, L0805: 4, L0809: 4, L0777: 4, L0758: 4, L0596: 4, S0410: 3, H0009: 3, T0006: 3, H0124: 3, T0041: 3, L0666: 3, H0144: 3, H0520: 3, S0028: 3, L0742: 3, L0749: 3, H0543: 3, H0661: 2, H0305: 2,			





									S0144: 1, L0770: 1, L0796: 1, L0667: 1, L0772: 1, L0373: 1, L0372: 1, L0800: 1, L0645: 1, L0764: 1, L0648: 1, L0767: 1, L0650: 1, L0657: 1, L0517: 1, L0789: 1, L0790: 1, L0665: 1, H0690: 1, H0658: 1, H0670: 1, H0672: 1, S0378: 1, S0380: 1, H0521: 1, S3012: 1, S0390: 1, S0027: 1, L0743: 1, L0779: 1, L0755: 1, L0759: 1, S0031: 1, S0436: 1, L0601: 1, H0136: 1, S0276: 1, H0542: 1 and S0424: 1.				
354	HWBBQ70	689121	364	222 - 353	768	Ala-21 to Ser-31.	L0717: 2, H0580: 1, S0222: 1, L0662: 1, H0436: 1, L0748: 1, H0445: 1 and S0308: 1.	6					
355	HWBBU75	780360	365	783 - 938	769	Ser-17 to Gly-22, Leu-34 to Ala-42.	L0665: 4, H0457: 3, H0264: 3, L0766: 3, H0521: 3, L0745: 3, H0556: 2, H0580: 2, S0352: 2, L0761: 2, L0806: 2, L0789: 2, L0748: 2, H0542: 2, H0255: 1, S0278: 1,						

									H0581: 1, H0271: 1, H0719: 1, H0413: 1, H0494: 1, S0002: 1, S0426: 1, L0769: 1, L0774: 1, H0660: 1, L0750: 1, L0752: 1, L0753: 1 and S0424: 1.			
356	HWBCN36	722259	366	378 - 650	770	Lys-45 to Pro-51, Arg-80 to Arg-85.			H0580: 1	1		
357	HWBDJ08	762860	367	253 - 405	771	Ser-30 to Gly-36.			L0794: 7, H0556: 4, S0414: 4, L0779: 4, H0031: 3, S0216: 3, H0265: 2, H0220: 2, H0688: 2, H0634: 2, L0655: 2, L0665: 2, H0659: 2, S0328: 2, H0521: 2, L0753: 2, L0758: 2, H0422: 2, S0114: 1, H0300: 1, S0356: 1, S0360: 1, H0580: 1, S0046: 1, H0643: 1, L3655: 1, H0250: 1, H0069: 1, H0635: 1, H0042: 1, H0575: 1, H0581: 1, S0049: 1, L0045: 1, H0622: 1, H0644: 1, H0641: 1, S0002: 1, L0763: 1, L0653: 1, L0776: 1, L0793: 1, L0777: 1, L0755: 1, L0731: 1, L0593: 1 and	6		

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--





									S0330: 1, L0602: 1, H0521: 1, S0044: 1, H0134: 1, H0478: 1, H0626: 1, S3014: 1, S0027: 1, S0028: 1, S0206: 1, L0745: 1, L0780: 1, L0759: 1, S0031: 1, S0434: 1, L0597: 1, L0599: 1, S0026: 1, H0423: 1, H0422: 1, S0424: 1, H0506: 1 and H0352: 1.			
360	HWDAJ01	794016	370	288 - 362	774	Pro-17 to Ser-24.	H0600: 1	17				
361	HWHPB78	740778	371	200 - 400	775	Gln-25 to Leu-30.	H0437: 2, L0769: 2, S0028: 2, L0439: 2, S0436: 2, H0556: 1, H0125: 1, S0420: 1, H0619: 1, H0587: 1, H0635: 1, H0253: 1, H0318: 1, H0744: 1, H0052: 1, H0009: 1, H0172: 1, H0266: 1, H0135: 1, H0494: 1, L3905: 1, L0438: 1, L3828: 1, H0547: 1, H0539: 1, H0521: 1, S0037: 1, L0593: 1, H0506: 1 and H0008: 1.	1				
362	HWLBO67	834315	372	42 - 161	776		S0374: 1	2				
363	HWLGP26	834770	373	1091 - 1306	777	Pro-26 to Met-35.	L0766: 5, L0803: 5, L0794: 3, S0410: 2, H0551: 2, H0435: 2,					

									L0756: 2, L0731: 2, H0585: 1, S0212: 1, S0282: 1, L0534: 1, S0442: 1, S0354: 1, H0735: 1, H0486: 1, H0014: 1, H0354: 1, H0644: 1, H0135: 1, H0647: 1, L0369: 1, L0640: 1, L0763: 1, L0770: 1, L3905: 1, L0646: 1, L0771: 1, L0804: 1, L0784: 1, L0528: 1, L0789: 1, L0790: 1, L0792: 1, L3827: 1, H0658: 1, L0749: 1, L0758: 1 and S0436: 1.			
364	HILCA24	869856	374	191 - 1174	778	Gln-52 to Arg-57, Glu-74 to Leu-84, Val-104 to Asp-110, Gly-157 to Gly-163, Asn-185 to Ser-195, Arg-245 to Asp-250, Pro-302 to Pro-310, Thr-316 to Tyr-322.	L0748: 4, H0090: 2, L0659: 2, H0521: 2, L0777: 2, L0608: 2, H0543: 2, T0002: 1, S0114: 1, L3658: 1, S0358: 1, S0408: 1, L3649: 1, T0109: 1, H0581: 1, H0622: 1, H0031: 1, H0644: 1, S0002: 1, L0657: 1, L0526: 1, L0789: 1, L0664: 1, S0380: 1, H0522: 1, L0749: 1 and L0779: 1.					
	HILCA24	782450	394	189 - 1172	798	Gln-52 to Arg-57.						



365	HE2CA60	888705	375	1731 - 1754	779	Glu-74 to Leu-84, Val-104 to Asp-110, Gly-157 to Gly-163, Asn-185 to Ser-195, Arg-245 to Asp-250, Pro-302 to Pro-310, Thr-316 to Tyr-322.	H0305: 16, L0777: 11, L0471: 10, S0422: 9, L0766: 9, H0624: 8, H0013: 7, H0170: 6, L2551: 6, H0046: 6, L0665: 6, L0598: 5, L0662: 5, L0776: 5, H0547: 5, L0758: 5, L0589: 5, H0171: 4, L0659: 4, L0666: 4, L0663: 4, L0756: 4, L0731: 4, S0358: 3, L2744: 3, L3655: 3, H0581: 3, H0457: 3, S0406: 3, L0744: 3, L0439: 3, L0752: 3, S0436: 3, H0542: 3, H0543: 3, L3643: 2, H0650: 2, H0657: 2, S0116: 2, S0442: 2, S0354: 2, L0717: 2, S0414: 2, H0486: 2, T0040: 2, H0318: 2, H0421: 2, H0428: 2, H0553: 2, H0090: 2,	17		
-----	---------	--------	-----	-------------	-----	---	--	----	--	--



									H0674: 1, H0591: 1, H0038: 1, H0551: 1, T0067: 1, H0100: 1, L0065: 1, S0440: 1, H0649: 1, H0529: 1, L0369: 1, L0763: 1, L0667: 1, L0630: 1, L0372: 1, L0521: 1, L0533: 1, L0775: 1, L0651: 1, L0806: 1, L0655: 1, L0661: 1, L0807: 1, L0656: 1, L0809: 1, L3872: 1, L0790: 1, L0664: 1, L2655: 1, L3663: 1, S0374: 1, L2706: 1, H0520: 1, H0435: 1, H0660: 1, H0672: 1, S0328: 1, H0539: 1, S0380: 1, H0753: 1, S0004: 1, H0696: 1, L0748: 1, L0754: 1, L0750: 1, L0753: 1, S0031: 1, H0444: 1, L0588: 1, L0605: 1, L0485: 1, H0216: 1, S0242: 1, H0423: 1, S0458: 1 and H0721: 1.				
	HE2CA60	770301	395	360 - 383	799								
366	HPWTF23	844775	376	283 - 675	780	Val-80 to Leu-92, Ser-98 to Lys-104, Pro-111 to Pro-122.	S0474: 47, H0710: 28, L0747: 18, L0659: 17, H0656: 13, H0436: 10,						







									L0657: 1, L0384: 1, L0529: 1, L5623: 1, L0793: 1, L0664: 1, S0216: 1, H0144: 1, H0723: 1, H0593: 1, H0689: 1, H0659: 1, H0672: 1, S0328: 1, H0539: 1, H0518: 1, H0521: 1, H0696: 1, H0134: 1, L0612: 1, H0732: 1, S3012: 1, S0390: 1, S0037: 1, S3014: 1, S0032: 1, L0743: 1, L0749: 1, L0752: 1, L0755: 1, H0707: 1, L0591: 1, L0592: 1, H0653: 1, H0136: 1, S0412: 1 and H0721: 1.			
	HPWTF23	843700	396	283 - 675	800	Val-80 to Leu-92, Ser-98 to Lys-104, Pro-111 to Pro-122.						
367	HLWAU42	695737	377	220 - 393	781		L0740: 8, H0486: 5, L0439: 5, H0733: 4, L0606: 4, L0731: 4, H0553: 3, S0422: 3, H0672: 3, H0696: 3, L0747: 3, H0581: 2, H0428: 2, H0169: 2, L0774: 2, L0518: 2, L0438: 2, H0436: 2, L0744: 2, L0779: 2,	CHROM				











										H0506: 1.			
	HGCAC19	842540	398		315 - 344	802							
	HGCAC19	801999	399		317 - 346	803							
369	HPQAX38	845752	379		295 - 345	783				S0136: 462 and H0413: 1.			
	HPQAX38	843592	400		295 - 345	804							
370	HEQBJ01	876546	380		2603 - 2662	784				S0360: 3, H0619: 3, H0673: 2, L0438: 2, H0685: 1, S0444: 1, H0544: 1, H0266: 1, H0163: 1, L0770: 1, L0646: 1, L0768: 1, L0766: 1, L0803: 1, L0776: 1, S0152: 1, S0027: 1, L0439: 1, L0747: 1, L0777: 1, L0752: 1 and L0758: 1.	16		
	HEQBJ01	861786	401		2603 - 2662	805							
	HEQBJ01	834633	402		505 - 564	806							
371	HTOJL95	762851	381		221 - 397	785			Gly-26 to Val-32.	H0264: 5, S0114: 3, S0134: 2, S0428: 2, H0381: 1, H0255: 1, H0402: 1, H0339: 1, H0581: 1, H0615: 1, H0090: 1, S0426: 1, L0369: 1, L0769: 1, L0779: 1, H0444: 1 and H0445: 1.	3		
	HTOJL95	806212	403		134 - 310	807			Gly-26 to Val-32.				
372	HTLIF12	901225	382		644 - 871	786			Phe-30 to Lys-37, Pro-43 to Lys-75.	H0616: 14, H0038: 12, H0618: 6, H0253: 5, L0758: 5, L0768: 4,			

									H0411: 2, L0779: 2, H0747: 1, L0151: 1, L0697: 1 and S0398: 1.			
	HTLIF12	891533	404	644 - 871	808			Phe-30 to Lys-37, Pro-43 to Lys-75.				
	HTLIF12	886780	405	644 - 871	809			Phe-30 to Lys-37, Pro-43 to Lys-75.				
	HTLIF12	870167	406	644 - 871	810			Phe-30 to Lys-37, Pro-43 to Lys-75.				
	HTLIF12	842691	407	644 - 871	811			Phe-30 to Lys-37, Pro-43 to Lys-75.				
	HTLIF12	834946	408	642 - 869	812			Phe-30 to Lys-37, Pro-43 to Lys-75.				
373	HTEEF26	879704	383	262 - 285	787				L0794: 5, L0766: 4, H0457: 3, H0038: 3, L0803: 3, L0777: 3, L0752: 3, H0574: 2, H0039: 2, H0040: 2, L0763: 2, L0775: 2, L0657: 2, L0666: 2, L0438: 2, S0406: 2, L0756: 2, L0779: 2, H0665: 2, L0411: 1, H0624: 1, H0170: 1, S0040: 1, S0001: 1, S0348: 1, S0354: 1, S0360: 1, S0408: 1, H0580: 1, S0045: 1, S0222: 1, H0486: 1, T0039: 1, H0575: 1, H0590: 1, H0581: 1, H0596: 1, H0687: 1,	7		

									S0003: 1, H0328: 1, H0644: 1, H0032: 1, L0455: 1, H0090: 1, H0616: 1, H0551: 1, H0412: 1, T0042: 1, H0494: 1, L0770: 1, L0637: 1, L0372: 1, L0641: 1, L0771: 1, L0767: 1, L0776: 1, L0607: 1, H0144: 1, S0374: 1, T0068: 1, H0547: 1, H0519: 1, H0658: 1, H0672: 1, S0330: 1, H0521: 1, S0044: 1, L0745: 1, L0731: 1, L0758: 1, L0759: 1, S0434: 1 and S0196: 1.				
	HTEEF26	789606	409	262 - 285	813								
374	HTEED26	762846	384	261 - 359	788	Asp-21 to Gln-28.	H0038: 3						
	HTEED26	753425	410	259 - 357	814	Asp-21 to Gln-28.							
375	HPJBJS1	878609	385	716 - 925	789	Arg-48 to Tyr-54.	S0152: 1 and H0521: 1.						
	HPJBJS1	829114	411	715 - 924	815	Arg-48 to Tyr-54.							
376	HOABP31	868327	386	148 - 522	790	Cys-22 to Ser-27.							
	HOABP31	835084	412	148 - 519	816	Cys-22 to Ser-27.							
377	HBJHT01	587262	387	200 - 265	791		L0667: 2, S0114: 1, H0351: 1, H0318: 1, H0615: 1 and L0764: 1.						
	HBJHT01	580026	413	193 - 336	817								
378	HE8FC45	845672	388	155 - 298	792		L0534: 2, L0539: 2, L0109: 2, L0562: 1, S0222: 1, H0587: 1,					7	

									H0013: 1, H0635: 1, H0615: 1, H0477: 1, H0264: 1, T0042: 1, L0766: 1, L0379: 1, L0365: 1, S0053: 1, L0758: 1 and H0543: 1.			
	HE8FC45	843781	414	155 - 298	818							
379	HTLIF11	843506	389	933 - 1049	793	Pro-4 to Gly-9.			H0253: 7, H0618: 4, H0620: 3, L0794: 3, L0769: 2, L0768: 2, L0439: 2, H0327: 1, H0051: 1, S0250: 1, S0036: 1, L0639: 1, L0761: 1, L0635: 1, L0791: 1, L0664: 1, L0438: 1, H0539: 1, L0741: 1, L0747: 1, L0750: 1, L0756: 1 and L0753: 1.			

Table 1B.2

Gene No:	cDNA Clone ID	Contig ID:	SEQ ID NO:X	ORF (From-To)	AA SEQ ID NO:Y	Tissue Distribution Library Code:Count (see Table 4 for Library Codes)
1	H6BSF56	762968	11	83 - 508	414	AR313:120, AR039:99, AR299:64, AR185:57, AR089:54, AR096:51, AR277:46, AR300:43, AR316:37, AR060:29, AR218:28, AR240:28, AR104:25, AR219:23, AR282:23, AR055:20, AR283:12, L0599:4, L0439:3, L0777:3, H0253:2, H0615:2, H0520:2, L0754:2, L0759:2, H0556:1, H0657:1, S0116:1, H0450:1, S0418:1, S0046:1, S0222:1, H0492:1, S0049:1, H0570:1, H0123:1, H0050:1, H0051:1, S0036:1, H0494:1, L0805:1, L0776:1, S0126:1, H0435:1, H0670:1, S0028:1, L0747:1, S0026:1 and H0542:1.
2	H6EEC72	889401	12	263 - 319	415	AR282:2, AR039:1, AR055:1, S0444:2, S0410:2, H0559:2, H0575:2, H0618:2, H0050:2, H0521:2, H0295:1, H0650:1, H0255:1, S0418:1, S0358:1, S0376:1, H0580:1, S0045:1, S0046:1, H0550:1, H0610:1, H0497:1, H0069:1, H0635:1, H0546:1, H0086:1, H0009:1, H0059:1, H0100:1, H0429:1, H0494:1, L0766:1, L0665:1, H0519:1, H0711:1, S0152:1, H0555:1, L0743:1, L0748:1, L0747:1, L0759:1, S0192:1, H0422:1 and H0506:1.
3	HACAB68	584773	13	135 - 371	416	L0748:4, H0457:3 and S6022:1.
4	HACBS22	847113	14	217 - 342	417	L0439:9, L0751:7, L0766:6, L0361:6, H0052:5, S0002:5, L0769:5, L0777:5, L0770:4, L0771:4, L0748:4, L0754:4, L0758:4, L0759:4, L0596:4, S0474:3, S0051:3, S0142:3, L0662:3, L0747:3, H0170:2, H0580:2, S0046:2, H0619:2, L0717:2, H0550:2, S0280:2, H0039:2, S0422:2, L0794:2, L0775:2, L0805:2, L0655:2, L5623:2, L0666:2, L0665:2, L0438:2, H0539:2, L0742:2, L0749:2, L0779:2, L0731:2, L0757:2, L0581:2, H0171:1, H0265:1, H0556:1, H0686:1, S0040:1, H0650:1, H0661:1, H0663:1, H0306:1, S0420:1, S0356:1, S0442:1, S0354:1, L3646:1, H0637:1, S0222:1, H0431:1, H0586:1, H0492:1, H0486:1, L3655:1, H0156:1, H0042:1, H0253:1, H0545:1, H0563:1, H0123:1, H0014:1, H0622:1, T0023:1, H0033:1, H0213:1, H0135:1, H0038:1, H0063:1, S0038:1, T0042:1, H0560:1, H0561:1, S0372:1, S0450:1, S0344:1, H0538:1, S0426:1, L0762:1, L0637:1, L3905:1, L5566:1, L0643:1, L0650:1, L0774:1, L0375:1, L0776:1, L0807:1, L0663:1, L2263:1, L3824:1, S0126:1, H0689:1, H0658:1, H0754:1, S0174:1, S0406:1, L0743:1, S0031:1, S0436:1, H0668:1, L3378:1 and H0506:1.
5	HACBT91	789939	15	329 - 508	418	AR283:41, AR219:39, AR277:38, AR218:33, AR055:29, AR316:28, AR039:25, AR104:22, AR299:22, AR096:20, AR089:20, AR185:19, AR240:19, AR282:18, AR060:17, AR300:16, AR313:16, L0665:5, L0743:3, H0341:2, L0761:2, L0756:2, S0356:1, H0734:1, S0280:1, T0048:1, H0271:1, S0440:1, H0641:1, H0646:1, L0770:1, L0637:1, L0800:1, L0773:1, L0648:1, L0662:1, L0768:1, L0766:1, L0649:1, L0375:1, L0784:1, L0806:1, L0655:1, L0809:1, H0672:1, S0406:1, L0747:1, L0749:1 and L0750:1.



6	HADDE71	839187	16	250 - 666	419	AR283:48, AR277:39, AR313:33, AR219:30, AR316:27, AR282:27, AR089:27, AR299:26, AR218:26, AR240:25, AR185:22, AR104:22, AR055:22, AR096:22, AR300:20, AR039:20, AR060:15 L0769:11, L0747:9, L0809:6, S0408:4, L0770:4, L0439:4, L0752:4, L0759:4, L0766:3, L0803:3, L0666:3, L0751:3, L0780:3, S0007:2, H0619:2, H0351:2, H0333:2, H0427:2, H0052:2, L0761:2, L0662:2, L0794:2, L0774:2, L0806:2, L0659:2, H0547:2, H0521:2, L0741:2, L0745:2, L0750:2, L0779:2, L0777:2, H0543:2, H0739:1, H0171:1, L3019:1, H0483:1, H0254:1, H0125:1, H0675:1, H0580:1, H0722:1, H0733:1, S0140:1, H0261:1, H0592:1, H0586:1, H0587:1, H0257:1, H0486:1, L0022:1, H0042:1, H0581:1, H0150:1, H0086:1, H0123:1, T0010:1, H0266:1, H0673:1, S0364:1, H0087:1, H0264:1, H0494:1, H0560:1, H0538:1, L0762:1, L0772:1, L0646:1, L0765:1, L0649:1, L0805:1, L0776:1, L0657:1, L0783:1, L5622:1, L0791:1, L2654:1, S0126:1, H0435:1, S0330:1, H0522:1, L0743:1, L0744:1, L0749:1, L0786:1, L0753:1, L0755:1, L0731:1, L0758:1, S0436:1, S0011:1 and S0192:1.
7	HADDJ13	827273	17	347 - 439	420	H0427:1
8	HADMA77	783049	18	992 - 1063	421	AR104:16, AR039:10, AR277:9, AR089:9, AR240:9, AR055:9, AR300:8, AR218:7, AR299:7, AR283:7, AR060:7, AR282:7, AR316:6, AR219:6, AR096:5, AR185:5, AR313:4 L0439:15, S0222:4, L0157:4, L0769:4, L0438:3, L0745:3, L0731:3, L0758:3, L0599:3, H0443:2, H0441:2, S0010:2, L0662:2, L0744:2, L0748:2, L0750:2, L0756:2, L0777:2, H0583:1, L0005:1, S0354:1, H0675:1, S0408:1, H0619:1, H0369:1, H0574:1, H0486:1, H0390:1, S0346:1, H0309:1, H0597:1, T0003:1, H0024:1, S6028:1, H0028:1, T0006:1, H0628:1, H0135:1, H0551:1, S0438:1, L0520:1, L0768:1, L0776:1, L0559:1, L0659:1, L0384:1, L0809:1, H0144:1, H0547:1, L0746:1, L0747:1, L0757:1 and S0434:1.
9	HADMB15	847116	19	238 - 300	422	AR104:19, AR218:19, AR219:16, AR089:11, AR313:8, AR055:8, AR060:7, AR299:6, AR282:5, AR300:5, AR039:5, AR240:5, AR316:5, AR185:5, AR277:4, AR283:4, AR096:3 L0595:2, L0442:1, L0005:1, L3653:1, H0390:1, H0081:1, H0024:1, L0770:1, L5566:1, L0651:1, L0565:1, L0439:1, L0747:1, L0752:1, H0445:1, L0592:1 and L0599:1.
10	HAGBQ12	722205	20	171 - 236	423	AR060:7, AR055:6, AR104:5, AR185:5, AR089:4, AR299:4, AR277:4, AR300:4, AR283:4, AR313:3, AR316:3, AR240:3, AR039:3, AR096:3, AR282:2, AR218:2, AR219:1 L0754:4, L0805:2, L0777:2, L0755:2, S0010:1, H0049:1, L0163:1, L0771:1, L0775:1 and L0776:1.
11	HAGCC87	638587	21	509 - 538	424	AR313:17, AR039:14, AR277:10, AR104:10, AR089:9, AR300:9, AR096:9, AR299:8, AR185:7, AR055:6, AR060:6, AR218:6, AR240:6, AR316:6, AR282:4, AR283:4, AR219:3 L0439:4, L0519:3, S0010:2, T0010:1, L0809:1, H0682:1, S0404:1, S0406:1, H0436:1 and L0756:1.
12	HAGDW20	637489	22	238 - 291	425	AR313:22, AR039:22, AR277:20, AR299:17, AR089:17, AR300:14, AR185:14, AR218:13, AR096:13, AR240:13, AR219:13, AR104:13, AR316:13, AR282:12, AR283:11, AR060:11, AR055:11 S0010:1 and H0616:1.
13	HAGEG10	823543	23	146 - 313	426	AR313:19, AR039:13, AR096:11, AR300:10, AR299:9, AR089:8, AR316:8, AR218:7, AR219:7, AR185:6, AR060:6, AR104:6, AR282:6, AR240:5, AR277:5, AR055:4, AR283:1 L0766:17, L0663:5, H0486:3, L0439:3, L0747:3, L0750:3, L0779:3, L0592:3, H0624:2, H0747:2,

						S0250:2, L0769:2, L0662:2, L0768:2, L0805:2, L0527:2, L0647:2, L0789:2, L0792:2, L0666:2, L0749:2, L0777:2, L0362:2, H0171:1, H0556:1, S0134:1, H0650:1, H0661:1, H0402:1, S0420:1, H0676:1, H0580:1, H0438:1, H0600:1, H0497:1, H0485:1, H0013:1, S0010:1, S0474:1, L0471:1, H0083:1, H0591:1, H0038:1, L0060:1, H0494:1, L0475:1, S0208:1, L5575:1, L0667:1, L0373:1, L0800:1, L0794:1, L0803:1, L0774:1, L0775:1, L0555:1, L0807:1, L0659:1, L0526:1, L0519:1, L0529:1, L0787:1, L0791:1, L0664:1, L0665:1, L3811:1, H0520:1, H0547:1, H0521:1, H0436:1, S0028:1, L0745:1, L0756:1, L0755:1, L0758:1, H0445:1, L0596:1, H0543:1 and H0423:1.
14	HAGEQ79	828055	24	515 - 550	427	AR104:37, AR283:37, AR277:26, AR055:20, AR185:20, AR316:18, AR299:17, AR282:16, AR313:16, AR219:16, AR240:16, AR089:16, AR218:14, AR060:14, AR096:13, AR039:12, AR300:10 L0805:6, L0809:4, L0803:3, L0779:3, L0794:2, L0776:2, L0438:2, L0439:2, L0745:2, L0747:2, S0436:2, S0408:1, T0082:1, S0010:1, H0052:1, T0010:1, H0598:1, L0770:1, L0774:1, L0783:1, L0788:1, L0665:1, L0742:1, L0777:1, L0753:1, L0755:1, L0759:1 and L0592:1.
15	HAGFS57	847120	25	241 - 405	428	AR055:7, AR104:6, AR060:5, AR277:4, AR300:3, AR299:3, AR096:3, AR316:3, AR039:2, AR185:2, AR089:2, AR283:2, AR218:2, AR219:1, AR313:1, AR240:1 L0438:6, L0439:4, S0360:3, S0422:3, H0547:3, L0747:3, L0005:2, S0222:2, S0002:2, L0664:2, L0754:2, S0434:2, H0506:2, H0170:1, H0171:1, S0116:1, S0212:1, H0580:1, H0749:1, H0455:1, L3655:1, H0069:1, H0098:1, S0010:1, L0105:1, H0581:1, H0263:1, H0009:1, L0471:1, H0099:1, S0003:1, H0039:1, S0036:1, H0090:1, H0591:1, S0426:1, L0794:1, L0776:1, L5622:1, S0052:1, H0144:1, H0682:1, H0659:1, H0521:1, H0555:1, L0756:1, H0445:1 and S0452:1.
16	HAGHN57	773286	26	900 - 932	429	AR313:12, AR316:11, AR218:11, AR185:11, AR039:10, AR219:10, AR299:10, AR060:9, AR055:8, AR277:8, AR282:8, AR096:7, AR089:7, AR300:7, AR240:6, AR104:6, AR283:4 H0521:5, L0777:5, S0376:4, H0733:3, H0156:3, H0519:3, H0436:3, L0731:3, H0656:2, H0580:2, H0747:2, L3816:2, H0036:2, L0471:2, H0090:2, H0040:2, H0551:2, H0494:2, S0438:2, S0440:2, H0529:2, L0809:2, H0144:2, S0374:2, H0593:2, H0170:1, L3643:1, H0583:1, H0650:1, S0418:1, S0358:1, S0444:1, L3645:1, H0741:1, H0734:1, S0045:1, S0476:1, H0619:1, H0586:1, H0643:1, H0632:1, H0486:1, S0280:1, H0590:1, S0010:1, S0346:1, H0581:1, H0231:1, H0046:1, H0123:1, S6028:1, H0687:1, S0003:1, S0214:1, H0252:1, H0615:1, H0212:1, L0455:1, S0366:1, H0163:1, H0038:1, H0634:1, T0067:1, L0475:1, H0560:1, H0561:1, S0464:1, H0646:1, S0426:1, H0026:1, L0790:1, H0520:1, H0435:1, S0328:1, H0539:1, H0704:1, S0027:1, L0439:1, L0750:1, L0756:1, L0757:1, S0434:1, L0581:1, L0595:1, H0543:1 and H0423:1.
17	HAGHR18	655435	27	28 - 126	430	AR052:6, AR055:6, AR247:6, AR061:6, AR053:6, AR060:5, AR182:5, AR263:5, AR310:5, AR312:4, AR251:4, AR033:4, AR244:4, AR293:4, AR282:4, AR269:3, AR185:3, AR270:3, AR298:3, AR089:3, AR253:3, AR296:3, AR104:3, AR232:3, AR299:3, AR285:3, AR198:3, AR286:3, AR184:3, AR237:3, AR277:3, AR295:3, AR300:3, AR213:3, AR284:2, AR283:2, AR267:2, AR266:2, AR290:2, AR268:2, AR289:2, AR313:2, AR316:2, AR294:2, AR186:2, AR096:2, AR183:2, AR233:2, AR240:2, AR229:2, AR218:2, AR177:2, AR259:2, AR246:2, AR248:2, AR175:2, AR292:2, AR309:2, AR265:2, AR226:1, AR039:1, AR234:1, AR179:1, AR258:1, AR219:1, AR231:1, AR238:1

18	HAHEA15	847013	28	196 - 237	431	L0717:1 and S0346:1. AR194:23, AR205:21, AR206:20, AR246:17, AR289:15, AR266:15, AR204:15, AR244:14, AR192:14, AR284:14, AR243:14, AR283:13, AR052:13, AR241:13, AR265:13, AR295:13, AR285:12, AR198:12, AR310:12, AR277:12, AR296:12, AR271:12, AR053:11, AR263:11, AR055:11, AR184:11, AR270:11, AR286:11, AR291:10, AR033:10, AR316:10, AR312:10, AR273:10, AR251:10, AR282:10, AR186:10, AR269:10, AR089:10, AR213:10, AR315:9, AR275:9, AR104:9, AR309:9, AR281:9, AR298:9, AR182:9, AR060:9, AR274:9, AR240:9, AR247:8, AR218:8, AR039:8, AR219:8, AR268:8, AR267:8, AR290:8, AR177:8, AR185:8, AR294:8, AR299:8, AR280:8, AR292:7, AR061:7, AR096:7, AR300:7, AR313:7, AR293:6, AR233:6, AR229:6, AR231:6, AR249:6, AR232:6, AR227:6, AR258:6, AR175:6, AR226:5, AR253:5, AR256:5, AR238:5, AR234:5, AR237:5, AR183:5, AR259:4, AR314:4, AR248:3, AR179:2 L0766:3, H0599:2, L0750:2, L0753:2, L3816:1, L0775:1, L0809:1, L0789:1, L0754:1, L0755:1 and L0759:1.
19	HAAJA47	534670	29	192 - 308	432	H0560:1, H0561:1 and H0542:1.
20	HAAJA92	845601	30	12 - 296	433	AR060:184, AR055:136, AR185:131, AR299:118, AR283:100, AR300:99, AR277:94, AR089:94, AR104:84, AR282:79, AR039:68, AR316:65, AR240:60, AR096:54, AR218:35, AR219:33, AR313:33 H0561:1 and L0758:1.
21	HAOAG15	852204	31	8 - 3511	434	AR169:4, AR241:3, AR172:3, AR206:3, AR263:3, AR176:3, AR235:3, AR168:2, AR183:2, AR297:2, AR166:2, AR163:2, AR282:2, AR171:2, AR193:2, AR178:2, AR181:2, AR162:2, AR274:2, AR182:2, AR298:2, AR217:2, AR224:2, AR312:2, AR053:2, AR287:2, AR254:2, AR295:2, AR239:2, AR205:1, AR293:1, AR216:1, AR175:1, AR238:1, AR285:1, AR316:1, AR277:1, AR033:1, AR179:1, AR267:1, AR291:1, AR288:1, AR289:1, AR089:1 L0759:3, S0314:2, L0744:2, L0756:2, L0755:2, S0046:1, H0391:1, H0052:1, H0050:1, S0318:1, S0338:1, S0312:1, L0766:1 and H0144:1.
22	HAQA192	688037	32	250 - 321	435	AR218:541, AR219:408, AR240:96, AR185:95, AR055:69, AR039:68, AR096:62, AR316:50, AR089:42, AR299:41, AR300:37, AR060:31, AR104:29, AR313:26, AR283:23, AR282:19, AR277:13 H0617:5, H0606:2, L0744:2, L0779:2, H0295:1, H0100:1, S0440:1, H0026:1, L0762:1, L0504:1, L0769:1, L0764:1, L0662:1, L0649:1, L0804:1, L0787:1, L0666:1, L0663:1, H0520:1, L0748:1, L0751:1, L0752:1 and S0436:1.
23	HAQBG57	837545	33	170 - 340	436	H0295:6, H0255:2, H0392:1, H0587:1, H0333:1, H0545:1, H0328:1, H0616:1, S0142:1, H0529:1, L0659:1, L0783:1, L0528:1, H0547:1, S0136:1, S0390:1, L0754:1, L0747:1 and L0752:1.
24	HAQCE11	633730	34	262 - 273	437	AR185:11, AR060:7, AR055:6, AR218:6, AR300:5, AR104:4, AR299:4, AR240:4, AR277:3, AR089:3, AR283:3, AR096:3, AR316:3, AR313:2, AR039:2, AR282:2, AR219:2 H0295:5 and L0438:1.
25	HATBI94	839468	35	18 - 224	438	AR060:5, AR055:5, AR039:4, AR300:4, AR299:4, AR240:3, AR185:3, AR089:3, AR104:3, AR283:3, AR282:3, AR316:2, AR219:2, AR218:2, AR096:2, AR277:2, AR313:2 L0758:9, L0769:4, H0556:3, L0756:3, H0486:2, H0156:2, H0040:2, H0529:2, L0766:2, L0803:2,

						L0659:2, L0809:2, L0565:2, H0539:2, L0748:2, L0754:2, L0777:2, H0595:2, L0595:2, L0361:2, S0114:1, H0402:1, S0358:1, H0580:1, L2255:1, S0222:1, H0587:1, H0497:1, L3655:1, H0013:1, H0427:1, H0581:1, H0251:1, H0046:1, H0009:1, H0320:1, H0594:1, L0266:1, H0031:1, L0055:1, H0376:1, H0634:1, S0038:1, H0100:1, L0667:1, L0771:1, L0804:1, L0776:1, L0547:1, L5623:1, L0790:1, L0791:1, L0793:1, L0665:1, H0144:1, L3827:1, H0519:1, S0126:1, H0682:1, H0659:1, H0521:1, S0404:1, L0740:1, L0747:1, L0759:1, S0436:1 and L0591:1.
26	HATCB45	631172	36	268 - 396	439	L0749:3, H0156:2, S0422:2, L0804:2, L0754:2, L0362:2, L3643:1, L0034:1, L0021:1, H0620:1, L0529:1, H0762:1, H0670:1, H0660:1, L0748:1, L0750:1 and L0758:1.
27	HATCI03	580805	37	271 - 324	440	AR313:42, AR039:30, AR299:20, AR096:19, AR185:19, AR277:18, AR300:18, AR089:17, AR219:15, AR240:14, AR218:13, AR316:12, AR104:10, AR060:10, AR282:8, AR055:7, AR283:5, S6026:1, H0156:1 and S0426:1.
28	HATEH20	836056	38	93 - 221	441	AR055:7, AR060:6, AR218:6, AR185:5, AR089:5, AR299:4, AR313:4, AR240:4, AR316:4, AR300:4, AR283:4, AR096:3, AR039:3, AR282:3, AR104:3, AR277:2, AR219:1, L0439:14, L0740:13, H0046:10, H0556:9, L0752:9, H0052:7, H0617:7, L0748:7, L0747:7, L0758:7, S0222:6, L0809:6, L0754:6, S0049:5, H0620:5, L0769:5, L0766:5, H0144:5, L0438:5, L0741:5, L0731:5, S0436:5, H0657:4, S0278:4, H0599:4, L0163:4, H0266:4, S0002:4, L0771:4, L0804:4, L0659:4, H0521:4, L0742:4, L0743:4, L0751:4, L0753:4, L0759:4, S0444:3, H0728:3, H0618:3, S0010:3, H0050:3, L0471:3, S0051:3, T0010:3, S0628:3, H0551:3, H0494:3, S0144:3, H0529:3, L0763:3, L0770:3, L0637:3, L0775:3, L0655:3, L0666:3, S0330:3, H0696:3, L0757:3, H0265:2, H0716:2, H0656:2, S0418:2, S0442:2, H0733:2, L0149:2, H0333:2, H0486:2, H0427:2, H0042:2, H0457:2, H0041:2, S0003:2, T0006:2, S0364:2, H0124:2, S0366:2, H0135:2, S0038:2, S0422:2, L0638:2, L5575:2, L5566:2, L0372:2, L0662:2, L0794:2, L0776:2, L0789:2, S0374:2, H0519:2, H0658:2, H0660:2, S0152:2, S0406:2, H0727:2, L0485:2, L0599:2, L0601:2, H0506:2, S0040:1, H0713:1, H0740:1, H0650:1, H0341:1, S0212:1, S0282:1, H0663:1, H0459:1, H0638:1, S0420:1, L0617:1, S0360:1, S0408:1, H0741:1, H0735:1, H0734:1, H0208:1, S0132:1, H0645:1, H0370:1, L0622:1, L0623:1, H0013:1, S0280:1, H0156:1, L0021:1, H0097:1, H0575:1, H0036:1, H0590:1, S0346:1, H0318:1, H0230:1, H0596:1, H0597:1, H0231:1, H0150:1, H0009:1, N0006:1, H0565:1, H0569:1, H0242:1, H0012:1, H0024:1, H0373:1, H0051:1, H0083:1, H0267:1, H0292:1, H0428:1, H0604:1, H0553:1, H0181:1, H0168:1, H0169:1, H0708:1, H0163:1, H0090:1, T0067:1, H0264:1, S0386:1, S0112:1, L0351:1, L0564:1, T0042:1, H0561:1, S0370:1, S0142:1, S0344:1, L0640:1, L0761:1, L0667:1, L0373:1, L0646:1, L0641:1, L0374:1, L0776:1, L0773:1, L0521:1, L0626:1, L0533:1, L0803:1, L0651:1, L0805:1, L0661:1, L0657:1, L0634:1, L0542:1, L0783:1, L0529:1, L0543:1, L5623:1, L0787:1, L0665:1, L3811:1, L3825:1, H0520:1, H0547:1, S0380:1, H0522:1, H0436:1, H0576:1, L0609:1, L0744:1, L0745:1, L0749:1, L0786:1, L0777:1, L0755:1, H0444:1, S0434:1, L0480:1, L0584:1, L0595:1, S0011:1, H0422:1 and H0008:1.
29	HBAGD86	838799	39	521 - 580	442	AR219:7, AR218:4, AR313:4, AR104:4, AR039:3, AR299:3, AR282:2, AR300:2, AR096:2, AR316:2, AR277:1, AR240:1, AR089:1

30	HBCJL35	1300785	40	17 - 391	443	L0809:4, L0766:3, L0439:3, H0624:2, H0411:2, L0794:2, L0749:2, L0756:2, L0005:1, L3649:1, S0476:1, H0599:1, L0471:1, S0051:1, T0010:1, H0266:1, S0150:1, S0422:1, L0637:1, L0765:1, L0803:1, L0783:1, L5622:1, H0144:1, H0672:1, S0392:1, L0748:1, L0754:1, L0779:1, L0777:1, L0731:1 and L0759:1.
						AR096:21, AR240:18, AR316:13, AR277:13, AR283:12, AR313:12, AR300:10, AR282:9, AR039:9, AR218:9, AR299:8, AR089:8, AR185:8, AR055:7, AR104:6, AR219:4, AR060:4 H0013:8, L0805:5, H0716:4, S0010:4, H0052:4, H0144:4, H0615:3, H0547:3, L0747:3, H0645:2, S0049:2, H0009:2, L0769:2, L0776:2, L0665:2, H0519:2, H0658:2, H0660:2, L0602:2, H0555:2, L0439:2, L0750:2, S0436:2, L0597:2, H0136:2, H0423:2, H0624:1, H0171:1, H0717:1, S0402:1, H0294:1, S0114:1, S0116:1, H0341:1, S0212:1, H0483:1, H0664:1, S0360:1, S0046:1, H0619:1, H0411:1, H0369:1, S0222:1, H0438:1, H0486:1, H0156:1, H0318:1, H0581:1, H0046:1, H0457:1, H0564:1, H0051:1, H0416:1, H0688:1, H0644:1, L0456:1, H0135:1, H0616:1, H0059:1, H0561:1, S0344:1, S0422:1, L0763:1, L0646:1, L0521:1, L0766:1, L0649:1, L0789:1, L0663:1, L0438:1, L3811:1, H0435:1, S0406:1, H0436:1, L0612:1, L0748:1, L0751:1, L0779:1, L0731:1, L0758:1, L0759:1, L0686:1, L0595:1, S0194:1 and H0721:1.
31	HBCJL35 HBGBC29	897937 691473	389 41	1033 - 1407 1016 - 1024	792 444	AR299:5, AR218:5, AR313:4, AR300:4, AR055:4, AR060:4, AR277:3, AR316:3, AR089:3, AR185:3, AR096:3, AR039:3, AR219:3, AR104:3, AR240:3, AR282:2, AR283:2 L0731:20, L0747:7, L0794:6, L0764:4, L0803:4, L0759:4, L0662:3, L0774:3, L0749:3, L0756:3, S0436:3, S0360:2, H0156:2, H0046:2, H0181:2, L0766:2, L0659:2, L0809:2, L0438:2, S0126:2, H0658:2, L0439:2, L0754:2, L0777:2, L0755:2, L0757:2, L0604:2, S0242:2, S0442:1, S0376:1, S0408:1, L0717:1, H0270:1, H0263:1, H0597:1, H0123:1, H0617:1, H0551:1, S0440:1, H0647:1, L0770:1, L0769:1, L0638:1, L0775:1, L0651:1, L0527:1, L0526:1, L0789:1, L0666:1, L0665:1, H0547:1, H0435:1, H0648:1, S0330:1, S0406:1, H0627:1, L0750:1, L0780:1, L0752:1, L0758:1, L0366:1 and H0293:1.
32	HBGNC72	892131	42	550 - 780	445	AR096:11, AR240:11, AR316:9, AR218:9, AR089:8, AR282:8, AR219:8, AR055:7, AR060:7, AR299:6, AR104:6, AR039:6, AR185:6, AR313:6, AR283:6, AR300:5, AR277:5 H0617:5, H0547:3, L0751:3, L0779:3, H0618:2, H0052:2, H0135:2, H0100:2, L0637:2, L0764:2, H0520:2, H0593:2, H0543:2, H0265:1, H0556:1, H0585:1, H0255:1, H0664:1, S0420:1, S0442:1, H0637:1, H0733:1, S0045:1, H0614:1, H0485:1, H0486:1, H0374:1, S0049:1, H0086:1, H0674:1, L0770:1, L0769:1, L3905:1, L0662:1, L0794:1, L0766:1, L0803:1, L0805:1, L0653:1, L0654:1, L0636:1, L0783:1, L5622:1, L5623:1, L0787:1, L0663:1, H0519:1, H0521:1, H0555:1, H0436:1, S0028:1, L0741:1, L0758:1, S0276:1 and H0352:1.
33	HBHAA81	846465	43	28 - 639	446	AR289:34, AR291:33, AR283:32, AR055:32, AR294:26, AR266:26, AR286:26, AR256:23, AR285:21, AR293:19, AR259:17, AR295:16, AR292:15, AR298:14, AR258:14, AR296:12, AR284:11, AR104:10, AR033:9, AR186:9, AR202:7, AR206:7, AR246:7, AR241:6, AR194:5, AR198:4, AR244:4, AR251:4, AR060:4, AR061:4, AR282:4, AR052:4, AR053:4, AR205:4, AR309:4, AR316:3, AR182:3,

34	HBIAC29	831751	44	1036 - 1125	447	AR312:3, AR192:3, AR273:3, AR229:3, AR183:3, AR310:3, AR271:3, AR213:3, AR248:3, AR270:3, AR277:2, AR185:2, AR275:2, AR299:2, AR269:2, AR300:2, AR247:2, AR267:2, AR175:2, AR089:2, AR313:2, AR265:2, AR268:2, AR237:2, AR096:1, AR232:1, AR039:1, AR240:1, AR179:1, AR231:1, AR234:1 H0599:8, S0366:7, L0485:6, H0733:5, H0734:5, L0769:5, H0735:4, H0729:3, H0728:3, H0619:2, H0706:2, L0661:2, L0756:2, L0759:2, S0282:1, S0029:1, S0222:1, L0622:1, H0122:1, S0010:1, H0196:1, H0012:1, H0200:1, H0373:1, S0628:1, S0364:1, S0036:1, S0294:1, L0770:1, L0638:1, L5565:1, L0657:1, L0809:1, L0789:1, L0791:1, L0438:1, L0439:1, L0750:1, L0777:1, S0260:1, L0604:1 and S0460:1.
35	HBIAC29	831751	44	1036 - 1125	447	AR089:25, AR218:17, AR104:14, AR219:13, AR313:12, AR316:11, AR060:11, AR096:10, AR055:10, AR299:9, AR185:9, AR039:9, AR240:8, AR282:8, AR300:8, AR283:6, AR277:5 L0105:11, L0745:5, L0770:4, L0794:4, L0777:4, S0003:3, L0766:3, L0806:3, L0809:3, L0740:3, L0751:3, L0749:3, S0376:2, S0360:2, L0598:2, L0776:2, L0666:2, L0663:2, S0126:2, H0659:2, H0658:2, S0406:2, H0436:2, S0142:2, L0754:2, L0756:2, L0604:2, H0624:1, H0265:1, S0116:1, H0669:1, H0331:1, L0586:1, S0049:1, H0597:1, L0471:1, H0024:1, S0214:1, H0169:1, L0455:1, H0135:1, S0422:1, L0451:1, L0772:1, L0764:1, L0765:1, L0773:1, L0387:1, L0804:1, L0805:1, L0657:1, L0659:1, L0526:1, L0783:1, L0529:1, L0788:1, L0664:1, L0665:1, L0748:1, L0779:1, L0731:1, L0599:1, H0543:1 and H0423:1.
35	HBICW51	553630	45	289 - 417	448	AR055:7, AR060:7, AR218:6, AR240:5, AR300:5, AR313:5, AR282:4, AR089:4, AR185:4, AR283:4, AR096:3, AR316:3, AR277:3, AR299:3, AR219:3, AR039:3 L0766:7, H0556:5, S0002:2, H0395:1, S0418:1, S0049:1, H0052:1, H0598:1, H0591:1, H0560:1, L0803:1, L0655:1, H0478:1, L0749:1, L0758:1, S0031:1, H0444:1 and H0543:1.
36	HBJAB02	837309	46	84 - 188	449	AR282:3, AR277:1, AR039:1, AR316:1 S0434:5, L0794:3, H0255:2, H0318:2, H0251:2, L0764:2, L0628:2, L0809:2, L0665:2, H0658:2, S0406:2, L0361:2, H0265:1, H0685:1, H0657:1, H0483:1, S0420:1, S0442:1, S0358:1, H0729:1, H0734:1, S0132:1, S0222:1, T0082:1, H0150:1, H0083:1, S0214:1, H0252:1, H0628:1, T0041:1, S0344:1, H0529:1, L0520:1, L0535:1, L0662:1, L0387:1, L0375:1, L0518:1, L0666:1, L0663:1, H0726:1, H0519:1, H0670:1, H0660:1, L0602:1, L0747:1, L0777:1, L0601:1, S0276:1, H0423:1 and H0422:1.
37	HBJAC65	679337	47	137 - 208	450	AR055:7, AR218:6, AR060:6, AR300:5, AR240:5, AR299:4, AR316:4, AR039:4, AR089:4, AR185:3, AR282:3, AR219:3, AR283:3, AR277:3, AR104:2, AR313:2 L0743:21, L0744:16, L0748:9, L0754:8, L0747:8, S0474:5, H0617:5, S0360:4, L0665:4, L0750:4, L0757:4, H0713:3, H0549:3, H0550:3, H0014:3, H0087:3, H0646:3, L0776:3, L0809:3, L3832:3, H0624:2, H0171:2, H0716:2, H0661:2, H0663:2, S0442:2, S0444:2, S0408:2, H0013:2, H0427:2, H0188:2, H0031:2, H0090:2, H0413:2, S0352:2, L0769:2, L0662:2, L0794:2, H0670:2, S0332:2, L0751:2, L0755:2, L0731:2, L0591:2, L0603:2, S0192:2, H0170:1, H0265:1, H0717:1, H0662:1, S0376:1, H0742:1, H0733:1, H0734:1, S0045:1, S0046:1, H0619:1, H0411:1, S0622:1, S0222:1,

38	HBIBM12	560606	48	47 - 142	451	H0392:1, H0592:1, H0587:1, H0333:1, T0039:1, S0280:1, H0042:1, H0618:1, H0318:1, S0049:1, H0309:1, H0596:1, H0123:1, H0510:1, H0284:1, H0688:1, H0033:1, H0424:1, H0213:1, H0708:1, H0039:1, T0004:1, H0509:1, L0640:1, L0637:1, L0641:1, L0771:1, L0775:1, L0376:1, L0806:1, L0657:1, L0658:1, L0659:1, L0365:1, L0782:1, L0791:1, L0792:1, L2260:1, H0144:1, H0547:1, H0519:1, H0711:1, H0682:1, H0651:1, H0539:1, S0454:1, S0206:1, S0032:1, L0779:1, L0601:1, S0194:1 and L3837:1.
39	HBIDS79	813588	49	1032 - 1355	452	AR282:9, AR313:7, AR039:7, AR055:7, AR299:6, AR060:5, AR104:5, AR089:5, AR185:4, AR096:4, AR300:4, AR316:3, AR283:3, AR277:3, AR240:3, AR218:2, AR219:2 H0318:1 and L0753:1.
40	HBJEL16	847030	50	115 - 225	453	AR299:21, AR240:19, AR089:18, AR096:18, AR060:18, AR313:17, AR219:17, AR283:16, AR282:16, AR218:15, AR039:15, AR104:15, AR055:14, AR316:13, AR185:12, AR277:11, AR300:10 L0769:7, L0754:7, L0777:7, L0809:4, L0751:4, L0771:3, L0776:3, L0439:3, S0408:2, H0318:2, L0163:2, H0673:2, H0038:2, L0766:2, H0539:2, H0521:2, S0406:2, H0555:2, L0748:2, L0750:2, L0756:2, L0731:2, H0739:1, H0624:1, H0171:1, H0556:1, H0685:1, H0295:1, H0294:1, H0663:1, S0442:1, S0410:1, H0580:1, H0734:1, H0747:1, L0717:1, S0222:1, H0600:1, H0574:1, H0559:1, H0069:1, L0021:1, S0010:1, H0052:1, L0040:1, H0327:1, H0150:1, H0620:1, H0024:1, T0006:1, H0644:1, S0366:1, H0135:1, H0059:1, L0351:1, H0494:1, S0438:1, H0647:1, H0529:1, L0763:1, L5565:1, L0372:1, L0644:1, L0764:1, L0773:1, L0662:1, L0768:1, L0389:1, L0805:1, L0542:1, L0783:1, L0545:1, L0792:1, L0664:1, S0374:1, H0547:1, H0658:1, H0696:1, S0188:1, L0745:1, L0746:1, L0749:1, L0753:1, L0758:1, H0444:1, S0436:1, L0603:1, S0026:1 and H0506:1.
41	HBJFK45	531919	51	430 - 456	454	H0046:2, H0009:2, H0090:2, H0494:2, L0438:2, H0547:2, H0521:2, L0439:2, L0777:2, H0543:2, H0556:1, S0342:1, S0045:1, H0619:1, H0632:1, H0013:1, H0156:1, L0021:1, H0575:1, H0318:1, S0003:1, L0483:1, H0628:1, H0623:1, H0561:1, L0761:1, L0803:1, L0804:1, L0659:1, L0382:1, H0144:1, H0539:1, S0152:1, H0478:1, H0631:1, L0741:1, L0740:1 and L0591:1.
42	HBJKD16	853358	52	78 - 173	455	AR282:3, AR055:2, AR060:2, AR219:2, AR185:2, AR300:1, AR039:1, AR283:1, AR218:1 H0318:1 and L0766:1.
						AR172:63, AR171:62, AR215:61, AR274:50, AR216:48, AR213:43, AR214:41, AR272:41, AR169:41, AR224:37, AR225:37, AR217:37, AR254:36, AR205:36, AR170:35, AR243:35, AR168:35, AR247:34, AR245:32, AR312:32, AR221:32, AR212:31, AR161:29, AR222:28, AR162:28, AR311:27, AR308:27, AR163:26, AR275:26, AR165:25, AR164:24, AR313:23, AR053:23, AR166:23, AR223:21, AR039:20, AR089:20, AR309:19, AR096:19, AR242:18, AR253:18, AR240:17, AR289:16, AR266:16, AR283:16, AR263:16, AR193:16, AR316:16, AR264:16, AR204:16, AR250:15, AR282:15, AR201:15, AR277:15, AR207:14, AR291:14, AR246:14, AR200:13, AR198:13, AR271:12, AR299:12, AR300:12, AR195:12, AR185:12, AR104:12, AR290:11, AR192:11, AR173:11, AR255:11, AR257:11, AR060:11, AR197:11, AR252:10, AR180:10, AR297:10, AR179:10, AR210:10, AR061:10, AR181:9, AR296:9, AR199:9, AR270:9, AR269:9, AR178:9, AR183:9, AR268:8, AR055:8, AR177:8, AR262:8, AR236:8, AR288:8, AR211:8, AR188:7, AR267:7, AR293:7, AR219:7, AR285:7, AR256:7, AR294:7, AR174:7, AR176:7,

						AR189:7, AR033:7, AR261:7, AR218:7, AR287:6, AR175:6, AR196:6, AR231:6, AR203:6, AR286:5, AR235:5, AR190:5, AR230:5, AR234:5, AR191:5, AR182:5, AR260:5, AR258:4, AR295:4, AR237:4, AR233:4, AR229:4, AR238:4, AR239:3, AR226:3, AR232:2, AR227:2, AR228:2, L0766:9, L0439:9, L0747:6, L2528:5, L0777:5, H0673:4, L0438:4, L0758:4, L0362:4, S0116:3, L0748:3, L0752:3, H0445:3, H0156:2, T0010:2, H0015:2, H0038:2, H0616:2, H0264:2, H0646:2, L0761:2, L0776:2, L0750:2, L0779:2, S0436:2, L0593:2, S0242:2, H0222:1, H0740:1, H0657:1, H0661:1, H0663:1, L2293:1, H0589:1, S0444:1, H0340:1, L3646:1, H0580:1, H0749:1, H0393:1, H0549:1, S0222:1, H0574:1, H0486:1, H0013:1, H0069:1, L0021:1, S0010:1, H0318:1, S0474:1, H0046:1, L0471:1, H0090:1, L0638:1, L0646:1, L0764:1, L0521:1, L0364:1, L0774:1, L0659:1, L0543:1, L5622:1, L0792:1, L0666:1, L0664:1, L0665:1, S0428:1, L2657:1, L2652:1, L3663:1, L2262:1, H0435:1, L3832:1, L0741:1, L0749:1, S0434:1, L0588:1, H0422:1, L0698:1 and L2359:1.
43	HBM96	561935	53	170 - 184	456	AR313:45, AR039:38, AR277:36, AR299:25, AR096:23, AR185:22, AR089:21, AR219:19, AR300:18, AR218:18, AR104:17, AR316:16, AR060:13, AR240:12, AR282:11, AR055:9, AR283:4, L0747:2, H0392:1, H0574:1, H0421:1, L0662:1, L0666:1, S0404:1, L0744:1 and H0543:1.
44	HBMX01	705047	54	363 - 449	457	AR219:38, AR313:32, AR218:31, AR283:30, AR277:27, AR104:27, AR039:25, AR089:23, AR316:22, AR055:21, AR299:21, AR282:20, AR096:20, AR185:17, AR240:17, AR060:15, AR300:15, L0748:5, H0318:3, H0543:3, H0484:1, H0402:1, S0474:1, H0421:1, H0052:1, H0083:1, H0266:1, H0553:1, H0272:1, S0440:1, S0142:1, S0210:1, S0002:1, L0761:1, L0766:1, L0792:1, H0520:1, H0710:1, L0747:1, H0444:1 and H0595:1.
45	HBMX26	695704	55	107 - 376	458	AR313:88, AR039:66, AR096:36, AR277:36, AR185:35, AR299:34, AR089:32, AR300:31, AR240:28, AR316:25, AR218:24, AR219:22, AR104:21, AR060:16, AR282:16, AR055:12, AR283:8, S0116:1 and T0042:1.
46	HBMUH74	866160	56	344 - 430	459	AR218:12, AR055:8, AR060:7, AR104:7, AR219:5, AR240:5, AR299:5, AR096:4, AR316:4, AR300:4, AR039:4, AR089:3, AR283:3, AR185:3, AR313:3, AR282:2, AR277:2, L0754:3, L0777:3, L0439:2, S0116:1, H0341:1, H0661:1, H0038:1, H0412:1, L0761:1, L0667:1, L0764:1, L0788:1, H0435:1, L0749:1, L0779:1 and L0758:1.
47	HBMWE61	778066	57	238 - 267	460	AR313:19, AR104:18, AR219:11, AR055:10, AR060:9, AR277:8, AR218:8, AR283:7, AR089:7, AR185:6, AR299:6, AR316:5, AR240:5, AR039:5, AR300:5, AR096:4, AR282:4, S0116:1.
48	HBNAX40	834801	58	2497 - 2646	461	AR218:8, AR313:8, AR055:6, AR060:6, AR089:5, AR104:5, AR185:4, AR300:4, AR299:4, AR316:4, AR096:3, AR277:3, AR240:3, AR039:3, AR283:3, AR282:3, AR219:2, L0439:11, H0171:5, L0754:5, L0748:4, H0052:3, L0662:3, L0756:3, L0755:3, H0422:3, S0360:2, L0738:2, H0032:2, L0803:2, L0655:2, L0789:2, L0605:2, H0423:2, H0638:1, T0114:1, H0156:1, L0021:1, S0010:1, H0581:1, H0046:1, L0471:1, H0014:1, H0356:1, H0188:1, H0553:1, H0591:1, S0386:1, T0042:1, H0625:1, H0641:1, S0142:1, L0598:1, L0369:1, L0640:1, L0375:1, L0654:1, L0659:1, L0783:1, L0663:1, L0665:1, H0144:1, L0352:1, H0547:1, H0648:1, H0672:1, H0555:1, H0436:1, L0749:1, L0779:1, L0731:1, L0758:1, L0759:1, H0445:1, L0366:1 and H0668:1.



49	HBHBJ76	810332	59	1603 - 1809	462	AR104:28, AR283:15, AR185:14, AR240:13, AR055:12, AR089:12, AR218:12, AR060:11, AR219:11, AR096:10, AR299:9, AR039:9, AR316:8, AR300:7, AR277:7, AR313:7, AR282:5, H0052:18, L0439:13, L0766:10, S0222:8, L0751:6, H0188:5, H0617:5, L0438:5, S0360:4, L0764:4, L0748:4, L0740:4, L0753:4, H0265:3, S0040:3, S0356:3, H0333:3, H0013:3, T0010:3, H0622:3, H0040:3, L0666:3, H0520:3, H0547:3, H0519:3, L0747:3, L0750:3, L0759:3, S0436:3, H0556:2, H0255:2, H0664:2, H0458:2, L0005:2, H0728:2, H0549:2, H0581:2, H0309:2, H0009:2, H0178:2, H0135:2, H0090:2, L0351:2, H0494:2, L0770:2, L0662:2, L0803:2, L0665:2, H0144:2, L0565:2, H0435:2, H0696:2, H0134:2, H0626:2, L0742:2, L0754:2, L0757:2, S0011:2, H0295:1, H0294:1, H0583:1, H0341:1, S0418:1, S0420:1, S0442:1, S0354:1, S0007:1, S0476:1, H0619:1, L3388:1, H0351:1, H0441:1, H0331:1, H0486:1, H0599:1, H0575:1, H0618:1, S0010:1, T0048:1, S0049:1, H0263:1, H0596:1, H0530:1, H0046:1, H0050:1, H0093:1, S0388:1, H0594:1, H0290:1, H0328:1, H0615:1, H0428:1, T0023:1, H0030:1, H0031:1, H0628:1, H0181:1, H0182:1, H0032:1, H0673:1, L0455:1, H0124:1, S0036:1, H0038:1, H0063:1, H0551:1, H0264:1, S0038:1, S0142:1, S0344:1, S0422:1, L0598:1, L0763:1, L0769:1, L3905:1, L0768:1, L0376:1, L0806:1, L0629:1, L0807:1, L4501:1, L0663:1, T0068:1, L3826:1, H0658:1, S0328:1, S0152:1, S3014:1, S0028:1, L0745:1, L0756:1, L0780:1, S0260:1, H0445:1, L0591:1, L0603:1, S0196:1, H0542:1, H0423:1, H0422:1, L0600:1 and H0352:1.
50	HBQAC57	793814	60	146 - 235	463	H0229:1 and L0780:1.
51	HBSAK32	856387	61	447 - 590	464	AR277:18, AR104:14, AR218:14, AR219:13, AR299:13, AR313:12, AR316:12, AR089:12, AR185:12, AR283:11, AR060:11, AR039:11, AR096:11, AR240:10, AR055:10, AR282:10, AR300:7, L0790:2, H0170:1, H0381:1, S0001:1, S0282:1, L0021:1, S0112:1, L0640:1, L0766:1, L0774:1, L0651:1, L0517:1, L0783:1, L0809:1, L0519:1, L0743:1, L0751:1, L0747:1, L0749:1, L0750:1, L0777:1, L0755:1, L0758:1 and L0759:1.
52	HBXCM66	639039	62	119 - 169	465	AR313:74, AR039:52, AR299:36, AR300:36, AR096:35, AR089:32, AR277:32, AR185:32, AR240:23, AR316:22, AR218:15, AR104:14, AR219:14, AR060:13, AR282:11, AR055:7, AR283:3, H0550:2, L0523:2, S0282:1, S0045:1, H0549:1, H0052:1 and S0038:1.
53	HBXCX15	637542	63	72 - 77	466	S0038:3, H0438:1, L0363:1 and S0053:1.
54	HCDBO32	831942	64	1669 - 1884	467	AR219:9, AR185:8, AR055:8, AR218:8, AR089:6, AR313:6, AR283:6, AR282:6, AR104:5, AR060:5, AR316:5, AR300:5, AR299:4, AR096:4, AR240:4, AR277:4, AR039:3, L0803:7, L0766:4, L0777:4, L0666:3, H0521:3, T0115:2, H0687:2, L0809:2, H0659:2, L0754:2, L0779:2, L0759:2, L3643:1, H0341:1, H0747:1, H0749:1, L3387:1, H0351:1, S0222:1, H0441:1, L3816:1, H0013:1, S0280:1, H0251:1, H0544:1, H0123:1, H0354:1, H0266:1, H0622:1, H0090:1, T0041:1, H0641:1, S0422:1, L0371:1, L0646:1, L0662:1, L0774:1, L0805:1, L0653:1, L0659:1, L0635:1, L0526:1, L0783:1, L0663:1, L0664:1, L0665:1, H0144:1, T0068:1, L3811:1, H0519:1, H0682:1, S0152:1, S0136:1, L0744:1, L0780:1, L0758:1, H0444:1, H0445:1, L0590:1, L0594:1, S0026:1 and H0422:1.
55	HCE2H52	847007	65	29 - 100	468	AR039:9, AR096:8, AR185:7, AR218:6, AR060:6, AR313:6, AR055:6, AR300:5, AR240:5, AR299:5,

						AR089:5, AR104:5, AR316:4, AR277:4, AR283:3, AR219:2, AR282:2 H0255:2, S0410:2, H0052:1, H0673:1, H0538:1, H0444:1 and H0445:1.
56	HCE3B04	831151	66	1588 - 1686	469	AR218:12, AR055:10, AR089:10, AR219:8, AR313:8, AR299:8, AR316:7, AR060:7, AR104:6, AR185:6, AR039:6, AR096:5, AR300:5, AR277:5, AR240:4, AR283:4, AR282:4 L0803:3, L0740:3, H0052:2, L0766:2, L0666:2, L0717:1, L0646:1, L0662:1, L0649:1, L0634:1, L0659:1, L0791:1, L0663:1, L0664:1, L0352:1, S0328:1, L0752:1, L0758:1 and L0594:1.
57	HCE5F78	838101	67	566 - 664	470	H0052:2 and H0445:2.
58	HCEEE79	560609	68	131 - 298	471	H0052:1
59	HCEEQ25	531784	69	111 - 182	472	AR039:8, AR313:7, AR185:7, AR055:7, AR300:6, AR060:6, AR240:6, AR218:6, AR089:5, AR299:5, AR104:5, AR096:4, AR316:4, AR277:3, AR282:3, AR283:3, AR219:3 H0052:1 and H0144:1.
60	HCEEU18	688041	70	209 - 340	473	AR313:46, AR039:35, AR299:24, AR219:21, AR277:21, AR089:20, AR096:19, AR185:19, AR218:16, AR316:14, AR300:13, AR104:13, AR240:12, AR060:11, AR282:10, AR055:9, AR283:5 H0052:1
61	HCEFZ82	831745	71	215 - 1012	474	L0748:11, H0052:8, L0803:8, L0749:8, L0770:7, L0439:5, L0746:4, L0752:4, L3811:3, H0575:2, H0012:2, H0031:2, L0768:2, L0804:2, L0774:2, L0740:2, L0747:2, L0756:2, L0779:2, L0757:2, L0758:2, L0592:2, L0593:2, H0556:1, S0420:1, S0376:1, H0441:1, H0632:1, S0010:1, T0115:1, H0545:1, H0009:1, H0620:1, H0197:1, H0051:1, S0388:1, S0051:1, H0252:1, H0032:1, L0455:1, H0591:1, H0272:1, L0564:1, S0438:1, S0344:1, L0373:1, L0646:1, L0794:1, L0766:1, L0805:1, L0776:1, L0783:1, L0809:1, S0374:1, H0522:1, H0134:1, L0780:1, L0731:1, L0759:1, S0436:1, L0597:1, H0543:1, H0423:1 and L0600:1.
62	HCEGG08	844506	72	1114 - 1197	475	AR240:6, AR282:6, AR104:5, AR060:5, AR089:4, AR277:4, AR096:4, AR283:3, AR039:3, AR300:3, AR299:3, AR313:3, AR185:2, AR219:2, AR316:2, AR218:2 L0439:15, H0052:11, S0007:9, L0438:6, L0731:6, L0779:5, L0754:4, H0550:3, L0769:3, S0126:3, L0743:3, H0194:2, H0687:2, H0623:2, L0768:2, L0776:2, L0659:2, L0666:2, L0663:2, H0689:2, S0330:2, L0748:2, L0786:2, L0777:2, L0752:2, L0758:2, L0608:2, H0352:2, H0662:1, S0356:1, S0354:1, S0444:1, S0045:1, S0476:1, H0441:1, H0431:1, H0333:1, H0642:1, H0575:1, H0590:1, T0048:1, H0150:1, H0024:1, S0050:1, S0388:1, H0252:1, H0039:1, H0135:1, H0038:1, H0264:1, H0494:1, L0770:1, L4747:1, L0372:1, L0646:1, L0521:1, L0794:1, L0803:1, L0775:1, L0653:1, L0661:1, L0807:1, L0657:1, L0809:1, L0792:1, L0664:1, L2258:1, H0144:1, L0352:1, H0519:1, H0593:1, H0658:1, H0672:1, H0539:1, S0406:1, L0751:1, L0749:1, L0756:1, L0753:1, H0506:1 and L2357:1.
63	HCFLN88	610000	73	101 - 178	476	S0410:22, L0770:9, L0748:9, L0769:7, L0776:6, L0659:6, H0424:5, L0761:5, L0731:5, H0486:4, L0803:4, L0809:4, L0666:4, H0696:4, L0754:4, L0779:4, L0758:4, H0729:3, H0618:3, H0135:3, L0637:3, L0771:3, L0766:3, L0805:3, L0665:3, L0751:3, H0542:3, H0341:2, H0402:2, S0358:2, S0376:2, S0360:2, H0747:2, S0132:2, L3109:2, L0717:2, H0592:2, H0253:2, S0010:2, H0052:2, H0545:2, H0050:2, H0617:2, H0087:2, H0551:2, H0100:2, H0560:2, L0763:2, L5565:2, L0646:2,

						L0764:2, L0655:2, L2260:2, S0374:2, H0414:2, S0406:2, H0436:2, L0743:2, L0740:2, L0749:2, L0755:2, L0757:2, L0759:2, H0445:2, H0136:2, H0543:2, H0423:2, H0352:2, H0170:1, H0171:1, H0225:1, H0713:1, S0218:1, L0785:1, H0692:1, S0212:1, H0483:1, H0254:1, H0305:1, S0356:1, S0442:1, S0444:1, S0408:1, H0619:1, H0393:1, H0406:1, H0370:1, H0249:1, H0101:1, H0250:1, S0280:1, H0599:1, H0575:1, H0706:1, T0048:1, H0318:1, S0474:1, H0581:1, T0115:1, H0009:1, H0572:1, H0024:1, S0051:1, H0271:1, H0288:1, T0006:1, H0213:1, H0553:1, H0644:1, S0364:1, H0163:1, H0090:1, H0264:1, H0488:1, S0112:1, H0494:1, H0652:1, S0344:1, S0002:1, S0426:1, L4497:1, L5575:1, L3905:1, L5566:1, L0772:1, L0641:1, L0645:1, L0773:1, L0650:1, L0774:1, L0775:1, L0378:1, L0806:1, L0783:1, L5622:1, L0790:1, L0664:1, L3827:1, H0547:1, H0519:1, S0126:1, H0711:1, H0672:1, S0330:1, H0521:1, S0392:1, S0037:1, L0742:1, L0439:1, L0745:1, L0747:1, L0750:1, L0777:1, S0436:1, L0485:1, L0608:1, S0011:1, H0653:1 and H0422:1.
64	HCFLT90	788578	74	527 - 532	477	AR218:22, AR219:21, AR313:17, AR240:17, AR096:15, AR089:13, AR104:11, AR316:11, AR060:10, AR185:9, AR055:8, AR282:8, AR300:7, AR299:7, AR039:5, AR277:5, AR283:1 L0777:11, L0745:9, L0754:7, L0769:4, L0747:4, L0766:3, L0649:3, L0779:3, L0757:3, H0580:2, H0266:2, H0181:2, H0617:2, L0770:2, H0651:2, H0522:2, L0748:2, L0740:2, L0746:2, S0434:2, H0136:2, H0423:2, H0716:1, H0295:1, H0657:1, L3659:1, H0459:1, S0360:1, S0410:1, H0733:1, S0132:1, S0476:1, S0300:1, H0013:1, L0021:1, H0575:1, S0010:1, H0530:1, H0545:1, H0594:1, H0292:1, H0553:1, L0143:1, H0068:1, S0036:1, H0059:1, H0561:1, H0641:1, S0344:1, S0422:1, L0772:1, L0764:1, L0771:1, L0662:1, L0775:1, L0776:1, L0527:1, L0663:1, L0438:1, H0520:1, S0126:1, H0689:1, H0659:1, H0539:1, S0027:1, L0439:1, L0751:1, L0750:1, L0752:1, L0755:1, L0758:1, L0592:1, S0026:1, L3813:1 and H0721:1.
65	HCQCM24	845070	75	815 - 931	478	AR282:13, AR185:9, AR039:9, AR300:9, AR089:8, AR060:7, AR299:6, AR316:6, AR096:5, AR277:5, AR055:5, AR240:3, AR218:2, AR104:2, AR283:2, AR313:1 L0803:6, L0774:5, H0696:5, L0752:5, L0758:4, S0442:3, S0358:3, L0809:3, L0666:3, H0431:2, H0166:2, L0762:2, L0775:2, L5622:2, L0754:2, L0601:2, L3643:1, H0306:1, S0356:1, S0354:1, S0360:1, S0408:1, H0637:1, H0331:1, H0574:1, H0042:1, H0036:1, H0263:1, H0596:1, H0597:1, H0012:1, H0620:1, H0510:1, H0109:1, H0169:1, H0674:1, S0440:1, H0647:1, S0426:1, L0640:1, L0764:1, L0771:1, L0388:1, L0659:1, L0517:1, L0545:1, L0543:1, L0791:1, S0374:1, H0547:1, H0519:1, H0648:1, H0522:1, H0478:1, L0748:1, L0751:1, L0777:1, L0780:1, L0753:1, S0434:1, S0436:1 and L0599:1.
66	HCRAY10	695709	76	141 - 578	479	AR089:10, AR060:10, AR055:10, AR277:10, AR218:9, AR299:8, AR185:8, AR240:8, AR283:7, AR300:7, AR316:7, AR096:7, AR282:6, AR313:6, AR104:6, AR039:6, AR219:5 L0758:6, H0545:3, L0754:3, L0759:3, H0170:2, L0766:2, L0649:2, L0665:2, H0696:2, H0177:1, H0549:1, H0392:1, H0327:1, L0695:1, H0674:1, H0529:1, L0762:1, L0769:1, L0800:1, L4753:1, L0658:1, L0809:1, L2263:1, L0740:1 and L0777:1.
67	HCRBF72	828945	77	191 - 823	480	AR231:6, AR291:4, AR230:3, AR299:3, AR033:3, AR161:2, AR185:2, AR197:2, AR162:2, AR060:2, AR181:2, AR215:2, AR311:2, AR288:2, AR271:2, AR216:2, AR196:1, AR257:1, AR309:1, AR089:1,

68	HCRNF78	793774	78	363 - 503	481	AR313:1, AR236:1, AR267:1, AR289:1 L0794:7, H0551:4, H0618:3, H0617:3, L0769:3, L0747:3, H0556:2, S0356:2, L0771:2, L0789:2, L0748:2, L0757:2, L0758:2, L0596:2, L0601:2, H0170:1, H0295:1, H0650:1, H0657:1, H0341:1, H0254:1, H0580:1, S0045:1, H0370:1, L0623:1, H0013:1, H0069:1, H0706:1, H0253:1, H0581:1, H0327:1, H0546:1, H0545:1, H0178:1, H0083:1, H0266:1, L0483:1, H0606:1, L0055:1, H0165:1, H0068:1, H0616:1, H0087:1, H0059:1, H0494:1, S0438:1, S0422:1, H0529:1, L3904:1, L5575:1, L0372:1, L0768:1, L0387:1, L0806:1, L0807:1, L5623:1, L3820:1, L2260:1, S0148:1, H0547:1, H0435:1, H0660:1, H0666:1, S0152:1, H0521:1, H0696:1, H0627:1, H0631:1, L0743:1, L0749:1, L0750:1, L0779:1, L0759:1, L0593:1, H0665:1, S0192:1 and H0543:1.
69	HCUAF85	589520	79	230 - 595	482	AR313:6, AR218:4, AR299:4, AR277:2, AR039:2, AR300:2, AR185:2, AR089:2, AR096:2, AR316:2, AR219:2, AR282:1, AR104:1 H0031:3, L0777:3, L0803:2, L0439:2, L0608:2, S0114:1, S0001:1, S0356:1, H0587:1, H0013:1, H0036:1, H0274:1, H0622:1, S0036:1, H0038:1, H0561:1, L0662:1, L0794:1, L0804:1, L0657:1, L0787:1, L0791:1, L0666:1, L0663:1, H0660:1, L0758:1, L0589:1, S0194:1 and H0423:1.
70	HCUCF89	637986	80	189 - 278	483	AR247:4, AR265:4, AR253:3, AR202:3, AR251:2, AR186:2, AR183:2, AR267:2, AR270:2, AR295:2, AR205:2, AR033:2, AR248:2, AR268:2, AR271:2, AR292:2, AR285:2, AR296:2, AR269:2, AR291:2, AR229:1, AR206:1, AR290:1, AR282:1, AR266:1, AR294:1, AR275:1, AR298:1, AR277:1, AR213:1, AR310:1, AR053:1, AR286:1, AR061:1, AR240:1, AR273:1, AR052:1, AR263:1, AR184:1, AR299:1, AR231:1, AR237:1 H0306:2 and H0305:1.
71	HCUCK44	790277	81	598 - 780	484	AR313:26, AR039:18, AR277:13, AR299:12, AR096:11, AR089:11, AR185:11, AR300:10, AR240:8, AR316:8, AR218:5, AR282:4, AR104:4, AR060:4, AR219:3, AR055:2 H0306:1, L0761:1 and H0436:1.
						AR172:3, AR245:3, AR252:3, AR161:3, AR164:3, AR166:3, AR221:2, AR162:2, AR163:2, AR169:2, AR311:2, AR261:2, AR165:2, AR214:2, AR224:2, AR296:2, AR264:1, AR195:1, AR277:1, AR212:1, AR217:1, AR096:1, AR193:1, AR295:1, AR287:1, AR216:1, AR213:1, AR257:1, AR275:1, AR089:1, AR201:1, AR282:1 L3450:19, H0271:18, S0002:12, L0794:12, S0144:8, L3783:8, L3807:8, H0250:7, L0777:7, L3119:6, L3729:6, L0665:6, H0518:6, S0132:5, H0264:5, S0426:5, S0328:5, S0330:5, L0758:5, S0444:4, S0344:4, L0770:4, L0776:4, L0659:4, S0052:4, S0053:4, L0743:4, L0747:4, S0436:4, L0065:3, L0769:3, L0766:3, L0774:3, L0657:3, H0521:3, L0748:3, L0749:3, L0731:3, L2999:2, H0306:2, H0402:2, H0638:2, S0360:2, S0408:2, S0476:2, H0393:2, S0278:2, L3516:2, H0050:2, H0014:2, H0416:2, H0617:2, H0634:2, H0494:2, S0440:2, L0800:2, L0771:2, L0648:2, L0549:2, L0806:2, L0805:2, L0666:2, S0428:2, S0216:2, L3210:2, S0404:2, L0439:2, L0740:2, L0750:2, L0752:2, L0596:2, L0599:2, T0002:1, H0159:1, H0650:1, H0657:1, L0785:1, H0662:1, L3659:1, S0442:1, S0358:1, S0410:1, L3646:1, H0741:1, L3117:1, H0619:1, L2791:1, H0613:1, H0600:1, H0592:1, H0486:1, L2504:1, L3750:1, H0069:1, H0581:1, H0596:1, H0044:1, H0009:1, H0024:1, H0057:1,

						S0051:1, H0355:1, H0615:1, L0483:1, S0036:1, H0090:1, H0038:1, H0087:1, H0413:1, H0100:1, S0448:1, S0142:1, S0210:1, H0529:1, L3904:1, L0761:1, L0772:1, L0372:1, L0646:1, L0645:1, L0764:1, L0773:1, L0662:1, L0768:1, L0387:1, L0649:1, L0551:1, L0550:1, L0803:1, L0775:1, L0653:1, L0655:1, L0656:1, L0782:1, L0787:1, L4537:1, L2257:1, S0374:1, H0690:1, L0659:1, H0658:1, S0378:1, H0710:1, S0152:1, H0696:1, H0704:1, S0406:1, H0436:1, L0744:1, L0756:1, L0779:1, L0780:1, L0755:1, L0759:1, S0031:1, L0581:1, L0601:1, L0603:1, S0196:1, L3632:1 and H0352:1.
72	HCUDD64	835082	82	256 - 402	485	AR282:3, AR219:3 H0052:3, S3012:2, L0754:2, H0402:1, H0413:1, S0374:1, L0438:1, L0748:1 and L0740:1.
73	HCWAE64	535893	83	410 - 427	486	AR277:7, AR282:1 H0305:1
74	HCWUFU39	651316	84	282 - 350	487	AR277:20, AR313:11, AR039:8, AR300:7, AR299:6, AR185:5, AR096:5, AR240:5, AR089:4, AR282:3, AR316:3, AR104:2, AR055:1, AR060:1 H0305:3, H0589:1, H0052:1 and T0010:1.
75	HCWUL09	834722	85	333 - 368	488	AR277:1 H0305:9, H0589:2 and S0001:1.
76	HDHAA42	695710	86	48 - 128	489	AR283:17, AR277:13, AR104:12, AR282:11, AR316:11, AR055:10, AR089:10, AR219:9, AR313:9, AR096:9, AR218:9, AR299:9, AR300:8, AR060:8, AR185:8, AR039:7, AR240:6 H0616:4, L0803:3, H0038:2, L0809:2, H0555:2, L0439:2, L0759:2, L0005:1, S0049:1, H0569:1, S0050:1, L0163:1, S0003:1, S0440:1, S0422:1, L0771:1, L0649:1, L0804:1, L0774:1, L0775:1, L0784:1, L0659:1, L0788:1, L0664:1, L0438:1, H0648:1, S0330:1, L0602:1, L0744:1, L0748:1, L0745:1, L0747:1, L0749:1, L0752:1, L0758:1, S0436:1, L0608:1, S0196:1 and S0412:1.
77	HDHEB76	553622	87	416 - 454	490	AR060:2, AR055:1 H0170:1 and H0570:1.
78	HDPCW16	840358	88	172 - 339	491	AR089:36, AR185:34, AR219:34, AR218:27, AR104:14, AR316:13, AR282:12, AR277:10, AR240:8, AR283:8, AR313:7, AR096:6, AR039:6, AR055:5, AR299:4, AR300:4, AR060:4 L0783:7, H0441:5, L0666:4, H0617:3, L3905:3, L0439:3, T0049:2, H0341:2, H0661:2, L0717:2, H0009:2, L0471:2, H0641:2, L0764:2, L0662:2, L0659:2, L0792:2, L0663:2, H0521:2, L0748:2, H0657:1, H0255:1, H0664:1, H0402:1, S0418:1, S0045:1, S0046:1, H0749:1, H0370:1, H0600:1, H0497:1, H0333:1, H0486:1, L0021:1, H0706:1, H0544:1, H0545:1, H0046:1, H0041:1, H0178:1, L0157:1, H0673:1, T0069:1, L0351:1, H0494:1, H0625:1, H0649:1, L0502:1, L0770:1, L0769:1, L5575:1, L0645:1, L0533:1, L0493:1, L0517:1, L0518:1, L0782:1, L0809:1, L0787:1, L0789:1, L0665:1, L0438:1, H0520:1, S0126:1, H0690:1, H0539:1, L0609:1, L0612:1, L0747:1, L0749:1, L0786:1, L0779:1, L0731:1, L0758:1, H0653:1, H0667:1 and H0352:1.
79	HDPDI72	897277	89	23 - 385	492	AR263:7, AR039:6, AR089:5, AR184:5, AR096:4, AR313:4, AR299:4, AR282:3, AR277:3, AR240:3, AR060:3, AR218:3, AR249:3, AR316:3, AR185:2, AR055:2, AR274:2, AR104:2, AR267:2, AR247:2, AR300:2, AR206:1, AR283:1, AR052:1, AR312:1, AR275:1, AR183:1, AR270:1, AR309:1, AR238:1

80	HDPDJ58	587265	90	279 - 341	493	H0521:2 and H0580:1. AR263:8, AR249:6, AR053:5, AR270:5, AR312:5, AR039:4, AR309:4, AR096:4, AR052:4, AR198:4, AR183:4, AR253:4, AR313:4, AR282:4, AR243:3, AR269:3, AR184:3, AR192:3, AR267:3, AR268:3, AR213:3, AR316:3, AR290:3, AR310:2, AR240:2, AR275:2, AR186:2, AR238:2, AR298:2, AR206:2, AR234:2, AR277:2, AR177:2, AR292:2, AR226:1, AR060:1, AR237:1, AR296:1, AR205:1, AR299:1, AR033:1, AR294:1, AR293:1, AR291:1, AR231:1, AR175:1, AR182:1, AR185:1, AR284:1, AR218:1 L0766:14, H0457:10, H0486:4, H0581:4, S0406:4, H0422:4, H0171:3, L0655:3, H0521:3, L0779:3, H0749:2, H0156:2, H0090:2, H0551:2, L0598:2, L0666:2, L0438:2, L0748:2, L0756:2, L0777:2, T0002:1, H0656:1, S0212:1, H0662:1, H0638:1, S0442:1, S0140:1, H0747:1, H0261:1, H0587:1, L3816:1, H0574:1, L0586:1, L0022:1, H0318:1, H0123:1, L0471:1, H0039:1, H0591:1, T0041:1, S0344:1, S0426:1, UNKWN:1, L0794:1, L0387:1, L0776:1, L0606:1, L0659:1, L0367:1, L0792:1, L0793:1, H0690:1, H0539:1, H0436:1, L0439:1, L0780:1, L0755:1, L0759:1, H0445:1, H0423:1 and H0506:1.
81	HDPFF10	853513	91	186 - 1463	494	AR243:14, AR246:11, AR193:11, AR164:10, AR165:10, AR166:9, AR247:9, AR171:9, AR268:9, AR170:9, AR197:9, AR205:8, AR168:8, AR245:8, AR169:8, AR221:8, AR183:8, AR162:7, AR264:7, AR223:7, AR195:7, AR161:7, AR163:7, AR225:7, AR222:7, AR277:7, AR240:7, AR200:6, AR179:6, AR272:6, AR172:6, AR192:6, AR224:6, AR214:5, AR296:5, AR216:5, AR242:5, AR263:5, AR287:5, AR217:5, AR282:5, AR288:5, AR175:5, AR237:5, AR266:5, AR201:5, AR291:5, AR250:4, AR198:4, AR300:4, AR185:4, AR231:4, AR096:4, AR297:4, AR293:4, AR215:4, AR316:3, AR227:3, AR309:3, AR290:3, AR039:3, AR313:3, AR089:3, AR204:3, AR207:3, AR060:2, AR283:2, AR312:2, AR181:2, AR188:2, AR228:2, AR055:2, AR257:2, AR203:2, AR286:2, AR239:2, AR270:2, AR299:1, AR189:1, AR232:1, AR061:1, AR256:1, AR033:1, AR104:1, AR210:1 H0521:7, L0599:2, H0265:1, H0717:1, H0363:1, H0545:1, H0652:1, L0764:1, L0803:1, L0805:1 and H0518:1.
82	HDPFU43	790189	92	220 - 378	495	AR277:53, AR283:13, AR096:12, AR240:12, AR316:11, AR219:11, AR218:10, AR104:9, AR282:9, AR299:8, AR039:8, AR313:8, AR185:8, AR300:7, AR060:7, AR055:7, AR089:7 H0585:8, L3388:8, S0474:7, H0622:4, H0141:3, H0553:3, S0126:3, H0539:3, L0750:3, H0556:2, H0717:2, H0581:2, S0440:2, S0344:2, L0771:2, L0774:2, L0664:2, S0380:2, H0521:2, L0751:2, L0755:2, L3643:1, H0650:1, H0306:1, S0420:1, L0617:1, S0444:1, S0360:1, H0580:1, S0046:1, H0619:1, H0549:1, H0486:1, T0039:1, L0021:1, H0274:1, H0457:1, H0012:1, H0620:1, S0003:1, S0214:1, H0615:1, H0628:1, H0087:1, H0551:1, S0438:1, S0422:1, H0529:1, L0770:1, L0761:1, L0767:1, L0768:1, L0804:1, L0515:1, L0809:1, H0703:1, H0711:1, H0672:1, S0378:1, H0522:1, H0696:1, H0555:1, S3014:1, L0754:1, L0747:1, L0749:1, L0731:1, H0445:1, S0436:1, L0581:1, S0026:1, H0543:1 and H0423:1.
83	HDPFY18	779450	93	161 - 184	496	AR313:9, AR039:6, AR299:4, AR300:4, AR096:3, AR185:3, AR089:3, AR316:2, AR277:2, AR240:1, AR218:1, AR060:1

84	HDPIE44	899328	94	169 - 351	497	S0114:1, H0427:1, H0123:1, H0688:1, H0264:1, L0547:1, L0518:1, L3811:1, H0521:1, H0445:1 and H0543:1. AR263:6, AR265:3, AR184:3, AR183:3, AR096:3, AR313:3, AR269:3, AR039:3, AR104:2, AR312:2, AR270:2, AR268:2, AR298:2, AR296:2, AR292:2, AR060:2, AR052:2, AR282:2, AR291:2, AR198:2, AR316:2, AR192:2, AR299:2, AR286:2, AR267:2, AR218:2, AR055:2, AR295:2, AR290:2, AR283:2, AR089:2, AR289:1, AR231:1, AR213:1, AR247:1, AR284:1, AR293:1, AR053:1, AR033:1, AR238:1, AR258:1, AR182:1, AR177:1, AR277:1, AR185:1, AR310:1 L3811:7, L0439:7, L0759:5, L0591:5, L0803:4, H0547:4, L0755:4, L0596:4, H0171:3, S0376:3, S0007:3, H0024:3, H0355:3, H0615:3, H0428:3, H0090:3, H0623:3, S0422:3, L0794:3, L0766:3, L0659:3, H0144:3, H0658:3, S0406:3, L0749:3, L0758:3, S0436:3, H0624:2, H0717:2, S0358:2, S0360:2, H0486:2, H0427:2, S0010:2, H0052:2, H0251:2, H0687:2, H0622:2, H0553:2, H0644:2, H0591:2, S0438:2, L0769:2, L0662:2, L0805:2, S0374:2, S0126:2, H0689:2, H0670:2, H0521:2, S0028:2, L0744:2, L0740:2, L0754:2, L0752:2, L0593:2, S0192:2, H0506:2, H0265:1, H0294:1, H0656:1, S0212:1, L0481:1, S0418:1, L0005:1, S0356:1, S0442:1, S0408:1, H0733:1, H0208:1, S0045:1, H0619:1, L0717:1, S0222:1, H0455:1, L3653:1, H0013:1, H0599:1, S0474:1, H0196:1, H0263:1, H0046:1, H0172:1, H0050:1, L0471:1, H0012:1, H0620:1, H0014:1, H0051:1, H0356:1, H0375:1, S0316:1, H0328:1, H0688:1, L0483:1, S0364:1, S0366:1, H0135:1, H0163:1, H0038:1, H0040:1, H0634:1, H0551:1, H0488:1, T0042:1, H0494:1, S0016:1, H0625:1, H0561:1, S0440:1, L2270:1, S0344:1, L3818:1, H0538:1, L0598:1, L0770:1, L0638:1, L0641:1, L0626:1, L0804:1, L0375:1, L0784:1, L0523:1, L0806:1, L0776:1, L0526:1, L0809:1, L5622:1, L0789:1, L0793:1, L4559:1, L0663:1, L4560:1, L3826:1, L3828:1, H0683:1, H0672:1, H0651:1, S0330:1, H0539:1, H0555:1, S0390:1, S0206:1, L0747:1, L0779:1, S0308:1, L0604:1 and H0423:1.
85	HDPIU94	813352	95	208 - 279	498	AR055:17, AR277:13, AR060:12, AR316:9, AR219:8, AR240:8, AR089:8, AR300:8, AR218:8, AR039:7, AR283:7, AR096:6, AR282:5, AR104:5, AR185:4, AR299:4, AR313:2 L0748:6, L0666:5, L0665:5, L0768:4, L0777:4, L0595:4, H0352:4, S0045:3, H0124:3, L0774:3, S0028:3, L0439:3, L0756:3, L0592:3, S0376:2, S0360:2, H0619:2, S0222:2, L3816:2, H0635:2, H0036:2, H0052:2, H0046:2, L0041:2, S0312:2, H0551:2, L3815:2, L0764:2, L0663:2, H0144:2, L3825:2, L0751:2, L0754:2, L0745:2, L0731:2, L0589:2, H0653:2, H0136:2, H0216:2, H0624:1, S0024:1, S0430:1, H0656:1, H0255:1, S0046:1, H0747:1, H0645:1, L2759:1, H0013:1, H0156:1, H0575:1, H0050:1, S0050:1, H0373:1, H0687:1, S0314:1, S0250:1, H0031:1, H0135:1, H0634:1, H0616:1, H0380:1, H0264:1, H0433:1, H0059:1, L0351:1, S0422:1, L0800:1, L0662:1, L0626:1, L0766:1, L0803:1, L0375:1, L0655:1, L0659:1, L0783:1, L0809:1, L0664:1, L2263:1, L2258:1, L2259:1, H0726:1, L3826:1, L3827:1, H0648:1, S0152:1, L3833:1, H0521:1, S0390:1, S3014:1, S0027:1, L0749:1, L0750:1, L0780:1, L0758:1, L0759:1, S0260:1 and L0366:1.
86	HDPOL37	745377	96	189 - 377	499	AR283:17, AR089:16, AR316:16, AR096:16, AR277:15, AR039:15, AR104:14, AR313:12, AR060:11, AR219:10, AR282:9, AR240:9, AR299:8, AR055:8, AR185:8, AR218:7, AR244:5, AR265:4, AR300:4, AR310:2, AR295:2, AR271:2, AR298:1, AR175:1, AR266:1, AR291:1, AR286:1, AR296:1, AR309:1,

87	HDPOO76	838594	97	109 - 159	500	AR312:1, AR294:1 H0618:2, H0040:1 and H0522:1. AR218:924, AR096:917, AR219:813, AR316:779, AR240:765, AR089:547, AR313:512, AR039:433, AR299:400, AR104:348, AR300:336, AR185:267, AR060:243, AR282:172, AR055:155, AR277:94, AR283:93 S0474:29, L0766:11, H0521:10, L0803:7, L0748:6, L0717:5, L0759:5, S0003:4, L3832:4, H0663:3, H0156:3, L0598:3, L0770:3, L0771:3, L0804:3, L2439:3, H0522:3, L0731:3, S0436:3, H0486:2, S0426:2, L0805:2, L0659:2, L2260:2, S0126:2, S0406:2, L0749:2, L0755:2, L0757:2, L0758:2, L0590:2, S0026:2, H0716:1, H0341:1, S0212:1, L0481:1, S0444:1, S0360:1, L3649:1, H0637:1, H0580:1, H0734:1, H0749:1, L3092:1, H0619:1, L3388:1, H0586:1, H0574:1, H0427:1, L0021:1, H0575:1, H0318:1, H0545:1, H0024:1, H0373:1, H0071:1, H0179:1, S0214:1, H0428:1, H0674:1, H0591:1, H0616:1, H0488:1, H0494:1, S0438:1, S0440:1, H0647:1, S0142:1, UNKWN:1, L0369:1, L0763:1, L0769:1, L0646:1, L0648:1, L0662:1, L0650:1, L0775:1, L0653:1, L0776:1, L0656:1, L0782:1, L0809:1, L0519:1, S0052:1, L2657:1, H0144:1, L3823:1, H0520:1, H0547:1, H0660:1, S0380:1, L0742:1, L0439:1, L0750:1, L0777:1, S0031:1, H0445:1, S0434:1, H0665:1, H0667:1, S0194:1, S0276:1 and S0458:1.
88	HDPPD93	637588	98	28 - 66	501	AR202:68, AR194:68, AR281:64, AR244:59, AR315:56, AR205:52, AR246:50, AR280:49, AR283:45, AR314:39, AR271:38, AR232:37, AR243:37, AR241:35, AR316:34, AR282:33, AR204:33, AR263:32, AR089:32, AR192:32, AR265:31, AR277:31, AR206:30, AR219:29, AR310:29, AR033:29, AR096:29, AR313:28, AR299:28, AR240:26, AR247:26, AR273:24, AR300:24, AR198:24, AR295:24, AR274:24, AR218:24, AR039:23, AR275:23, AR055:23, AR213:23, AR104:22, AR251:22, AR238:20, AR177:20, AR312:20, AR060:19, AR226:19, AR052:19, AR231:18, AR053:18, AR309:18, AR234:18, AR227:18, AR185:17, AR292:17, AR237:17, AR229:16, AR258:16, AR183:16, AR175:15, AR294:14, AR256:13, AR259:13, AR233:13, AR293:11, AR186:11, AR253:10, AR061:10, AR266:10, AR267:9, AR285:8, AR248:8, AR270:8, AR296:8, AR284:7, AR179:7, AR289:7, AR249:7, AR268:6, AR269:6, AR291:6, AR184:6, AR298:5, AR286:5, AR182:5, AR290:4 L0794:6, L0748:6, H0556:5, L0771:5, H0052:4, L0756:4, L0596:4, H0265:3, H0341:3, H0587:3, L0662:3, L0803:3, L0790:3, S0152:3, L0750:3, S0114:2, S0360:2, H0318:2, L0471:2, L0369:2, L0763:2, L0770:2, L0764:2, L0766:2, L0774:2, L0378:2, L0789:2, L0666:2, L3825:2, H0547:2, L0747:2, L0777:2, L0581:2, H0543:2, H0422:2, S0218:1, H0255:1, S0418:1, S0354:1, S0376:1, S0408:1, L3649:1, S0045:1, H0747:1, H0619:1, L0717:1, S0222:1, H0431:1, H0586:1, H0013:1, H0069:1, S0049:1, H0009:1, H0071:1, H0083:1, H0428:1, T0006:1, H0424:1, H0213:1, H0644:1, H0628:1, H0135:1, H0163:1, H0616:1, H0413:1, H0059:1, H0561:1, S0448:1, H0647:1, L3818:1, S0002:1, L0769:1, L0800:1, L0363:1, L0767:1, L0768:1, L0649:1, L0804:1, L0806:1, L0657:1, L0512:1, L0659:1, L0384:1, L0647:1, L5622:1, L5623:1, L0664:1, L0665:1, S0374:1, L3828:1, S0126:1, H0711:1, H0658:1, H0666:1, H0539:1, H0753:1, H0521:1, H0522:1, S0406:1, H0555:1, H0436:1, L0439:1, L0749:1, S0031:1, L0595:1, H0136:1, H0542:1, H0423:1, S0424:1 and H0352:1.



89	HDPWPW82	778405	99	395 - 484	502	H0522:1
90	HDPXN20	801896	100	61 - 186	503	H0521:1
91	HDTAU35	838139	101	260 - 313	504	AR060:1023, AR299:967, AR300:859, AR185:836, AR055:789, AR277:731, AR283:653, AR282:627, AR089:609, AR104:608, AR039:494, AR316:450, AR240:391, AR096:364, AR313:222, AR219:187, AR218:164 H0486:1
92	HDTAV54	801898	102	191 - 292	505	AR283:87, AR299:76, AR277:74, AR282:72, AR316:71, AR313:64, AR240:63, AR096:63, AR219:61, AR060:54, AR218:51, AR055:51, AR089:49, AR185:49, AR300:44, AR104:40, AR039:35 L0751:14, L0748:8, L0605:8, L0758:6, L0750:5, L0755:5, L0757:5, L0761:4, S0406:4, L0747:4, L0752:4, L0717:3, L0659:3, L0740:3, L0754:3, L0753:3, L0731:3, L0596:3, S0444:2, L0770:2, L0769:2, L0662:2, L0768:2, L0766:2, L0774:2, L0775:2, H0435:2, H0672:2, S0330:2, L0744:2, L0745:2, L0780:2, S0436:2, H0423:2, H0739:1, H0224:1, H0225:1, H0294:1, T0049:1, L0785:1, S0116:1, L3659:1, H0306:1, S0354:1, S0360:1, H0742:1, H0208:1, S0046:1, S0476:1, S6026:1, S0278:1, H0331:1, H0486:1, L0477:1, L0586:1, S0280:1, H0575:1, T0082:1, H0036:1, H0421:1, H0057:1, S0051:1, H0239:1, H0510:1, S0250:1, H0030:1, H0031:1, H0644:1, L0055:1, S0036:1, H0551:1, S0438:1, H0509:1, S0144:1, S0422:1, L0520:1, L0762:1, L0638:1, L0772:1, L0372:1, L0646:1, L0764:1, L0771:1, L0773:1, L0648:1, L0386:1, L0776:1, L0655:1, L0783:1, L0790:1, L0666:1, S0374:1, S0126:1, H0689:1, H0682:1, H0659:1, H0670:1, H0539:1, S0380:1, H0704:1, L0743:1, L0779:1, L0759:1, L0588:1, L0593:1, L0361:1, L0366:1, H0653:1, S0242:1, H0422:1, S0446:1 and H0506:1.
93	HDTGW48	827285	103	375 - 464	506	AR313:4, AR316:3, AR096:3, AR039:2, AR300:1, AR055:1, AR282:1, AR060:1, AR104:1, AR240:1, AR299:1, AR277:1 H0591:2, L0758:2, H0585:1, H0486:1, H0618:1, L0794:1, L0804:1, H0672:1 and L0750:1.
94	HDTLM18	836057	104	345 - 524	507	AR313:9, AR089:5, AR299:5, AR185:4, AR300:3, AR060:3, AR096:3, AR282:3, AR039:2, AR316:2, AR055:2, AR104:2, AR240:1, AR277:1, AR283:1 H0486:1 and L0599:1.
95	HE2CH58	838140	105	321 - 479	508	H0171:3, S0376:1, L0637:1, L0768:1, L0805:1, L0659:1, L0748:1, L0759:1 and L0595:1.
96	HE2PO93	771655	106	770 - 898	509	AR219:19, AR218:19, AR313:13, AR299:13, AR185:13, AR089:11, AR055:10, AR316:10, AR060:10, AR300:9, AR096:8, AR104:7, AR039:7, AR240:6, AR282:6, AR283:5, AR277:3 L0803:5, L0731:5, S0422:4, L2903:3, S0408:2, H0040:2, L0766:2, L0666:2, L2657:2, H0144:2, H0648:2, L0748:2, L0439:2, L0754:2, L0779:2, H0170:1, H0171:1, S0114:1, H0657:1, L2285:1, S0354:1, S0360:1, H0580:1, H0742:1, H0741:1, H0749:1, L2777:1, L0717:1, H0411:1, H0431:1, H0586:1, H0052:1, H0596:1, H0014:1, S0388:1, S0051:1, S0003:1, H0591:1, T0042:1, H0625:1, H0509:1, L0598:1, H0026:1, L0763:1, L0639:1, S0372:1, L0646:1, L0641:1, L0768:1, L0649:1, L0651:1, L0805:1, L0776:1, L0635:1, L0664:1, L0665:1, L2264:1, L2262:1, S0374:1, L0438:1, L0352:1, H0672:1, S0380:1, H0696:1, H0134:1, S0406:1, H0478:1, L0758:1, L0759:1, S0436:1, S0011:1 and S0424:1.

97	HE6AU52	562782	107	41 - 166	510	H0008:1
98	HE6CS65	762960	108	295 - 483	511	AR219:61, AR277:59, AR218:48, AR283:47, AR282:43, AR316:39, AR089:38, AR313:36, AR299:34, AR240:33, AR104:29, AR055:29, AR096:29, AR039:27, AR185:26, AR300:22, AR060:21 L0777:16, L0748:12, L0757:11, L0776:8, L0439:7, H0692:6, H0046:6, L0769:5, L0666:5, S0242:5, L0770:4, L0771:4, L0438:4, L0743:4, L0754:4, L0749:4, L0758:4, S0444:3, H0051:3, L0662:3, L0766:3, S0378:3, L0751:3, L0747:3, S0436:3, S0212:2, H0637:2, H0497:2, H0545:2, H0050:2, H0031:2, H0090:2, H0100:2, L0768:2, L0561:2, L0774:2, L0775:2, L0657:2, H0670:2, S014:2, L0744:2, L0752:2, L0581:2, H0624:1, H0170:1, H0713:1, H0717:1, S6024:1, T0049:1, H0255:1, S0356:1, S0442:1, S0358:1, S0376:1, S0360:1, H0619:1, L3651:1, L0717:1, S0278:1, H0391:1, H0333:1, H0013:1, H0053:1, H0575:1, S0346:1, H0052:1, H0263:1, H0596:1, L0738:1, H0572:1, H0510:1, H0266:1, H0688:1, H0039:1, H0622:1, H0111:1, H0181:1, H0617:1, H0032:1, H0169:1, H0634:1, H0087:1, H0412:1, S0450:1, S0440:1, L0639:1, L0637:1, L0372:1, L0646:1, L0651:1, L0806:1, L0659:1, L0792:1, L0664:1, L0665:1, S0216:1, H0144:1, H0697:1, S0374:1, L3812:1, H0520:1, H0547:1, H0658:1, H0660:1, H0648:1, H0521:1, H0696:1, S0027:1, S0028:1, L0741:1, L0740:1, L0779:1, L0731:1, L0759:1, S0260:1, H0445:1, S0434:1, L0362:1 and L0366:1.
99	HE6DO92	562767	109	38 - 115	512	AR055:8, AR218:7, AR060:6, AR300:4, AR240:4, AR283:4, AR185:4, AR299:4, AR089:3, AR104:3, AR277:2, AR316:2, AR039:2, AR282:2, AR219:2, AR096:2, AR313:1 H0265:1 and H0100:1.
100	HE6EY13	847058	110	171 - 311	513	AR283:50, AR218:31, AR240:28, AR096:25, AR219:23, AR316:22, AR313:22, AR089:22, AR104:21, AR299:20, AR185:19, AR055:18, AR060:17, AR282:15, AR277:13, AR039:13, AR300:11 H0692:12, L0748:7, L0751:7, S0434:6, H0265:5, H0494:5, L0659:5, H0545:4, H0100:4, L0766:4, L0666:3, S0126:3, S0406:3, L0743:3, L0754:3, L0750:3, L0731:3, L0361:3, H0542:3, H0657:2, S0356:2, S0358:2, H0733:2, S0007:2, L0021:2, S0474:2, H0581:2, S0049:2, L0471:2, L0163:2, H0181:2, H0040:2, H0087:2, S0344:2, S0002:2, L0769:2, L0774:2, H0689:2, S0378:2, H0521:2, L0747:2, L0757:2, L0758:2, L0759:2, L0362:2, H0543:2, H0352:2, H0556:1, T0002:1, H0716:1, H0656:1, S0212:1, S0418:1, S0442:1, S0376:1, S0444:1, S0360:1, H0637:1, S0046:1, H0393:1, L0717:1, S0278:1, H0549:1, H0427:1, H0123:1, H0011:1, H0012:1, H0015:1, H0083:1, H0188:1, H0328:1, H0615:1, H0428:1, H0039:1, H0030:1, H0606:1, H0124:1, H0708:1, H0135:1, H0163:1, T0067:1, H0412:1, S0438:1, H0654:1, S0142:1, H0529:1, L0638:1, L3904:1, L3905:1, L0761:1, L0667:1, L0627:1, L0646:1, L0649:1, L0803:1, L0661:1, L0657:1, L0512:1, L0518:1, L0791:1, L0793:1, L0663:1, H0144:1, S0374:1, L0438:1, H0520:1, H0670:1, H0672:1, S0328:1, H0539:1, H0518:1, H0555:1, H0478:1, S0141:1, S0027:1, L0741:1, L0744:1, L0439:1, L0752:1, L0753:1, L0755:1, S0436:1, L0591:1, S0242:1, H0423:1, S0456:1 and H0506:1.
101	HE8BQ49	589443	111	133 - 168	514	H0013:2
102	HE8SG96	862016	112	118 - 192	515	AR052:43, AR184:40, AR248:40, AR249:35, AR253:33, AR312:30, AR053:28, AR313:25, AR265:24, AR213:24, AR310:23, AR096:22, AR173:22, AR263:21, AR165:20, AR309:20, AR164:19, AR247:18, AR183:18, AR166:18, AR257:17, AR299:17, AR290:17, AR269:17, AR270:17, AR175:17, AR218:16,

						AR268:16, AR258:16, AR238:15, AR229:15, AR292:15, AR162:15, AR161:15, AR293:14, AR300:14, AR262:14, AR163:14, AR284:14, AR259:13, AR251:13, AR219:13, AR039:13, AR226:13, AR267:12, AR296:12, AR182:12, AR231:12, AR240:11, AR177:11, AR285:11, AR298:11, AR179:11, AR191:11, AR237:10, AR281:10, AR236:10, AR291:10, AR286:10, AR316:10, AR260:10, AR089:10, AR294:10, AR228:9, AR234:9, AR255:9, AR280:9, AR315:9, AR199:9, AR282:8, AR239:8, AR314:8, AR185:8, AR256:8, AR196:8, AR033:8, AR295:8, AR289:8, AR055:8, AR287:7, AR235:7, AR288:7, AR212:7, AR232:7, AR266:7, AR203:7, AR180:7, AR178:6, AR242:6, AR061:6, AR261:6, AR297:6, AR200:6, AR277:6, AR197:6, AR230:6, AR189:6, AR233:6, AR250:6, AR227:6, AR264:6, AR192:5, AR207:5, AR172:5, AR308:5, AR245:5, AR193:5, AR181:5, AR060:5, AR170:5, AR168:5, AR188:5, AR171:4, AR311:4, AR214:4, AR283:4, AR216:4, AR241:4, AR210:4, AR223:4, AR190:4, AR104:4, AR195:4, AR201:4, AR224:4, AR254:3, AR222:3, AR275:3, AR217:3, AR274:3, AR169:3, AR225:3, AR272:3, AR211:3, AR204:3, AR186:2, AR271:2, AR205:2, AR198:2, AR176:2, AR243:2, AR174:2, AR215:1, H0244:1 and S0106:1.
103	HE9CY05	834826	113	55 - 762	516	AR039:1, AR277:1, AR300:1, AR282:1, L0748:8, L0749:3, L0471:2 and H0144:1.
104	HE9GG20	633719	114	319 - 348	517	AR104:15, AR055:10, AR089:10, AR060:9, AR277:7, AR185:7, AR300:7, AR218:6, AR299:6, AR313:6, AR096:6, AR282:5, AR316:5, AR219:5, AR283:5, AR039:5, AR240:5, L0748:6, H0144:3, S0010:2, S0474:2, L0439:2, L0749:2, H0171:1, H0662:1, H0734:1, S6022:1, S0222:1, S0280:1, L0109:1, H0163:1, L0639:1, L0659:1, L0744:1, L0745:1, L0747:1, L0756:1, L0596:1 and S0276:1.
105	HEAAW94	847340	115	189 - 224	518	AR282:3, AR218:3, AR299:2, AR039:2, AR277:2, AR096:1, AR316:1, AR055:1, AR300:1, L0439:26, L0438:20, L0748:17, L0766:16, L0754:16, L0731:16, H0556:9, L0740:8, S0222:7, H0090:7, L0774:7, H0144:6, L0745:6, L0779:6, L0777:6, L0758:6, S0003:5, L0662:5, L0794:5, S0418:4, H0575:4, L0776:4, L0751:4, L0749:4, L0756:4, L0780:4, L0752:4, L0591:4, H0423:4, H0341:3, S0360:3, H0369:3, H0156:3, L0435:3, L0769:3, L0775:3, L0809:3, L0666:3, H0547:3, S0328:3, H0521:3, L0747:3, L0750:3, H0543:3, H0171:2, S0442:2, S0354:2, S0358:2, S0132:2, S0278:2, H0497:2, T0039:2, H0706:2, H0036:2, S0474:2, H0596:2, H0009:2, H0375:2, S6028:2, H0266:2, S0214:2, H0328:2, H0622:2, H0644:2, H0591:2, H0413:2, T0041:2, L0770:2, L0796:2, L0363:2, L0806:2, L0659:2, L0542:2, L0783:2, L0791:2, L0665:2, L3811:2, H0518:2, S3014:2, S0028:2, H0595:2, S0434:2, S0436:2, L0589:2, L0604:2, L0601:2, H0542:2, S0424:2, L0411:1, H0624:1, H0170:1, L0615:1, H0265:1, S0342:1, S6024:1, S0134:1, H0657:1, S0212:1, H0450:1, S0420:1, L0005:1, S0444:1, H0580:1, H0741:1, S0045:1, S0476:1, H0393:1, H0550:1, H0441:1, H0370:1, H0600:1, H0586:1, H0587:1, H0486:1, H0250:1, H0635:1, L0021:1, S0182:1, L0563:1, H0052:1, H0309:1, H0046:1, L0157:1, H0566:1, H0081:1, H0050:1, H0057:1, S0051:1, S0318:1, S0316:1, H0687:1, S0250:1, H0615:1, H0428:1, H0039:1, L0483:1, H0553:1, L0055:1, H0032:1, H0673:1, S0366:1, H0038:1, H0634:1, H0380:1, H0488:1, H0623:1, H0059:1, S0112:1, L0351:1, H0641:1, H0646:1, S0002:1, S0426:1, L0638:1, L4747:1, L0761:1, L0627:1, L0372:1,

							L0646:1, L0374:1, L0644:1, L0771:1, L0767:1, L0768:1, L0549:1, L0550:1, L0533:1, L0804:1, L0650:1, L0375:1, L0651:1, L0523:1, L0655:1, L0782:1, L0790:1, L0663:1, L0664:1, S0148:1, L0352:1, H0520:1, H0519:1, S0126:1, H0672:1, H0754:1, S0152:1, H0522:1, H0696:1, S0044:1, S0406:1, L0612:1, S3012:1, L0746:1, L0786:1, L0759:1, H0445:1, L0684:1, L0608:1, H0667:1, S0276:1 and H0422:1.
106	HEBCI18	831464	116	855 - 1064	519		AR055:8, AR060:7, AR185:6, AR104:6, AR283:5, AR089:5, AR300:5, AR218:4, AR299:4, AR313:4, AR316:4, AR096:3, AR277:3, AR219:2, AR039:2, AR282:2
107	HEBDF77	692347	117	681 - 791	520		AR104:10, AR213:5, AR055:4, AR172:4, AR060:4, AR221:4, AR254:3, AR161:3, AR162:3, AR170:3, AR089:3, AR163:3, AR207:3, AR218:3, AR313:3, AR039:2, AR223:2, AR096:2, AR205:2, AR296:2, AR185:2, AR282:2, AR243:2, AR283:2, AR230:2, AR181:2, AR197:2, AR299:2, AR224:2, AR316:2, AR228:2, AR300:2, AR176:2, AR277:1, AR295:1, AR217:1, AR219:1, AR309:1, AR222:1, AR240:1, AR238:1, AR216:1, AR226:1, AR233:1, AR264:1, AR177:1, AR266:1, AR289:1, AR297:1, L0805:6, L0438:5, L0439:5, L0794:3, L0759:2, L0005:1, S0007:1, H0351:1, S0346:1, L0157:1, L0351:1, L0769:1, L0638:1, L0776:1, L0741:1, L0756:1, L0608:1 and L0366:1.
108	HEBDQ91	840288	118	1211 - 1336	521		AR218:18, AR219:15, AR104:14, AR185:11, AR055:10, AR060:9, AR313:9, AR299:8, AR096:7, AR089:7, AR282:7, AR316:6, AR240:6, AR277:6, AR283:6, AR039:5, AR300:5, S0007:5, L0805:3, S6026:1, L0769:1, L0438:1, L0741:1, L0748:1 and L0758:1.
109	HEBFR46	847064	119	200 - 289	522		AR313:58, AR039:47, AR300:30, AR096:29, AR299:29, AR277:28, AR089:27, AR185:27, AR316:22, AR219:22, AR104:21, AR218:20, AR240:20, AR282:15, AR060:15, AR055:11, AR283:7, H0457:10, H0550:5, H0436:5, H0549:4, H0616:4, L0519:4, H0556:3, H0580:3, S0007:3, S0046:3, L0809:3, L0747:3, L0777:3, S0436:3, H0295:2, T0040:2, H0266:2, L0761:2, L0783:2, L0789:2, H0658:2, H0521:2, L0753:2, L0731:2, L0596:2, H0543:2, S0040:1, S0116:1, S0282:1, H0662:1, H0402:1, H0125:1, L0534:1, L0562:1, S0356:1, S0358:1, H0749:1, L3816:1, H0559:1, H0069:1, H0599:1, H0618:1, H0253:1, H0581:1, H0546:1, H0123:1, S0051:1, H0083:1, H0687:1, H0284:1, H0124:1, H0038:1, H0551:1, H0623:1, S0038:1, T0041:1, S0440:1, S0150:1, L3818:1, S0002:1, L0763:1, L0769:1, L5575:1, L0627:1, L0800:1, L0662:1, L0803:1, L0793:1, L0666:1, L2264:1, L3825:1, L3827:1, L3828:1, H0547:1, H0519:1, H0539:1, S0037:1, S0206:1, L0748:1, L0749:1, H0595:1, L0593:1, S0194:1 and S0276:1.
110	HEBGE07	798096	120	106 - 234	523		S0007:1
111	HELAT35	693175	121	215 - 277	524		AR313:30, AR039:24, AR185:15, AR299:13, AR096:13, AR300:12, AR277:11, AR218:11, AR089:10, AR240:8, AR316:8, AR104:7, AR060:6, AR219:5, AR055:5, AR282:4, AR283:2, S0045:1 and H0100:1.
112	HELBUS4	637624	122	82 - 135	525		AR039:40, AR313:39, AR185:24, AR299:21, AR277:18, AR096:18, AR089:16, AR300:14, AR316:13, AR218:12, AR104:12, AR219:12, AR240:12, AR060:9, AR282:8, AR055:8, AR283:4, L0748:3, S0045:1, L0749:1 and S0436:1.
113	HEMEY47	834491	123	440 - 472	526		AR313:86, AR039:58, AR096:37, AR299:36, AR089:34, AR277:32, AR185:31, AR240:30, AR300:27,

114	HEOMC46	866171	124	154 - 309	527	AR316:25, AR219:23, AR218:23, AR104:18, AR060:16, AR282:16, AR055:11, AR283:7, L0717:2, H0052:2, L0748:2, L0750:2, H0686:1, S0442:1, H0329:1, S0046:1, H0551:1, H0538:1, L0646:1, L0663:1, H0672:1, S0152:1, H0522:1, L0759:1, L0581:1 and L0593:1.
115	HEPBA14	855935	125	664 - 711	528	AR277:48, AR283:34, AR219:31, AR218:30, AR316:28, AR313:27, AR282:27, AR089:25, AR299:23, AR240:23, AR096:22, AR039:22, AR104:20, AR185:20, AR300:19, AR055:19, AR060:13, H0749:2, H0581:2, H0457:2 and S0116:1. AR222:530, AR224:483, AR172:461, AR217:453, AR168:409, AR214:400, AR169:392, AR171:348, AR221:329, AR223:292, AR170:277, AR314:262, AR210:259, AR216:246, AR215:227, AR315:218, AR052:194, AR280:183, AR225:182, AR053:169, AR200:164, AR219:158, AR245:151, AR212:140, AR205:138, AR213:131, AR253:125, AR312:124, AR218:122, AR281:120, AR273:117, AR254:115, AR248:107, AR104:106, AR313:106, AR250:104, AR189:102, AR309:102, AR308:99, AR199:98, AR249:97, AR243:94, AR186:90, AR275:90, AR240:89, AR203:88, AR272:88, AR033:88, AR247:85, AR310:81, AR231:79, AR268:79, AR316:78, AR193:78, AR264:75, AR290:74, AR096:74, AR190:74, AR246:73, AR188:73, AR201:71, AR206:71, AR173:70, AR255:70, AR180:69, AR265:69, AR291:68, AR197:68, AR211:66, AR288:64, AR269:63, AR202:62, AR244:62, AR271:62, AR242:62, AR274:61, AR270:61, AR296:60, AR178:59, AR183:58, AR207:57, AR285:57, AR284:56, AR165:56, AR039:55, AR267:55, AR196:54, AR195:54, AR089:54, AR311:54, AR164:53, AR179:52, AR175:52, AR166:51, AR191:51, AR198:50, AR252:50, AR162:49, AR182:49, AR251:48, AR184:48, AR181:48, AR234:48, AR185:47, AR263:47, AR238:47, AR176:47, AR174:47, AR237:46, AR300:45, AR299:45, AR297:45, AR239:44, AR163:44, AR060:44, AR161:43, AR229:42, AR282:42, AR177:41, AR292:40, AR194:39, AR287:37, AR294:37, AR061:34, AR204:34, AR241:32, AR295:32, AR230:31, AR293:31, AR232:31, AR226:29, AR258:29, AR298:29, AR192:28, AR262:27, AR266:27, AR289:26, AR236:24, AR257:24, AR256:23, AR235:23, AR277:22, AR055:22, AR260:21, AR259:21, AR283:20, AR261:18, AR286:17, AR233:14, AR227:13, AR228:12 H0150:1
116	HEQAH80	701984	126	150 - 248	529	AR219:28, AR218:28, AR313:7, AR300:7, AR039:6, AR240:6, AR316:6, AR096:6, AR277:5, AR299:4, AR185:4, AR282:4, AR089:3, AR060:3, AR055:2, AR104:2, AR283:2 S0358:9, L0757:6, H0544:2, H0545:2, H0551:2, L0770:2, L0803:2, L0665:2, H0672:2, L0747:2, L0755:2, L0731:2, S0434:2, L0591:2, L0599:2, L3658:1, S0420:1, S0376:1, S0278:1, H0635:1, L0022:1, H0042:1, H0575:1, H0184:1, H0546:1, H0266:1, L0194:1, H0644:1, H0673:1, H0591:1, H0634:1, T0067:1, H0488:1, H0413:1, H0623:1, S0440:1, S0344:1, S0002:1, S0426:1, L0764:1, L0771:1, L0804:1, L0775:1, L0776:1, L0655:1, L0606:1, L0783:1, L0809:1, L5623:1, L0532:1, L0663:1, S0053:1, L2259:1, H0547:1, H0690:1, H0435:1, S0454:1, H0696:1, S0406:1, L0751:1, L0759:1, H0444:1 and S0458:1.
117	HETDW58	790557	127	541 - 609	530	AR104:86, AR219:76, AR218:62, AR313:59, AR283:55, AR299:49, AR185:46, AR055:44, AR277:40, AR316:35, AR089:35, AR282:31, AR039:29, AR060:24, AR096:21 L0731:7, H0046:4, H0494:4, L0439:4, H0013:3, S0010:3, S0036:3, L0748:3, H0542:3, H0486:2,

						H0599:2, H0009:2, H0050:2, S0003:2, H0428:2, L0749:2, L0777:2, H0136:2, H0265:1, L3643:1, H0686:1, H0650:1, S0116:1, H0341:1, H0638:1, S0418:1, S0356:1, S0360:1, H0742:1, H0741:1, H0728:1, H0733:1, S0046:1, H0747:1, S0222:1, H0497:1, H0333:1, L3653:1, H0427:1, H0156:1, H0581:1, H0744:1, H0309:1, H0327:1, H0562:1, H0510:1, S0312:1, S0214:1, H0615:1, L0055:1, H0038:1, H0433:1, S0438:1, S0002:1, L0598:1, H0529:1, L0768:1, L0766:1, L0550:1, L0805:1, L0653:1, L0776:1, L0655:1, L0661:1, L0527:1, L0657:1, L5623:1, L2262:1, H0144:1, H0701:1, L3661:1, S0122:1, H0365:1, H0648:1, H0539:1, S0152:1, H0521:1, H0696:1, H0555:1, L0740:1, L0754:1, L0745:1, L0747:1, L0756:1, L0779:1, L0757:1, L0758:1, L0759:1, H0445:1, S0436:1, L0588:1, L0595:1, L0362:1, S0026:1, S0242:1, H0422:1, S0424:1, H0721:1 and H0352:1.
118	HET67	704077	128	292 - 492	531	AR060:3, AR104:3, AR300:3, AR089:3, AR055:2, AR299:2, AR313:2, AR282:2, AR277:2, AR185:1, AR039:1, AR316:1, AR096:1 H0046:21, L0803:4, L0790:2, L0750:2, L0777:2, L0758:2, L0362:2, S0280:1, S0474:1, L0769:1, L0794:1, L0774:1, L0809:1 and L0666:1.
119	HFCDW95	847383	129	151 - 159	532	L0766:9, L0803:8, H0341:7, H0521:7, L0770:6, L0771:6, L0754:6, L0752:6, L0731:6, S0354:5, S0422:5, L0662:5, H0519:5, L0439:5, L0779:5, L0758:5, S0436:5, H0009:4, H0673:4, L0800:4, L0521:4, L0805:4, L0659:4, L0809:4, L0438:4, S0028:4, L0485:4, L0601:4, H0657:3, H0638:3, S0418:3, H0733:3, S0007:3, S0222:3, L3655:3, S0214:3, H0529:3, L0369:3, L0794:3, L0649:3, L0776:3, L0665:3, L3391:3, H0144:3, H0670:3, S0406:3, L0756:3, L0755:3, L0759:3, H0667:3, S0420:2, S0358:2, S0360:2, H0580:2, H0729:2, S0476:2, H0645:2, S0262:2, S0300:2, L2543:2, H0156:2, S0010:2, H0085:2, H0178:2, H0375:2, S0282:2, H0266:2, S0003:2, H0428:2, H0169:2, S0036:2, H0090:2, H0634:2, L0640:2, L0769:2, L0637:2, L0761:2, L0646:2, L0774:2, L0775:2, L0806:2, L0807:2, L0783:2, L5622:2, L0666:2, L2653:2, L2264:2, H0725:2, L3827:2, H0547:2, H0435:2, H0659:2, S0380:2, S0314:2, S0206:2, L0740:2, L0753:2, L0757:2, S0434:2, L0596:2, H0668:2, H0542:2, H0170:1, H0556:1, S0342:1, H0713:1, H0717:1, H0716:1, H0294:1, L2877:1, T0049:1, S0218:1, L2910:1, L2915:1, L2991:1, S0282:1, S0400:1, L2289:1, H0241:1, H0402:1, L0534:1, L0539:1, S0376:1, S0444:1, S0410:1, H0329:1, H0722:1, H0728:1, H0734:1, S0045:1, H0749:1, H0406:1, H0411:1, H0443:1, S0220:1, H0441:1, H0415:1, H0438:1, H0362:1, H0333:1, H0574:1, L0623:1, H0486:1, L1819:1, T0060:1, H0013:1, H0427:1, H0599:1, H0575:1, H0318:1, S0474:1, H0581:1, H0374:1, T0110:1, H0150:1, H0563:1, H0050:1, H0014:1, S0388:1, S0051:1, H0687:1, H0039:1, H0030:1, H0553:1, H0644:1, H0628:1, H0166:1, L0455:1, H0708:1, S0366:1, H0591:1, H0038:1, H0551:1, H0380:1, H0623:1, S0386:1, T0042:1, H0494:1, H0561:1, S0370:1, H0509:1, H0130:1, H0641:1, L0598:1, L0763:1, L0638:1, L0796:1, L0667:1, L0630:1, L0373:1, L0641:1, L0773:1, L5569:1, L5574:1, L0381:1, L0655:1, L0607:1, L0661:1, L0527:1, L0518:1, L5623:1, L0787:1, L0789:1, L0790:1, L0792:1, L0793:1, L0710:1, L2262:1, L2380:1, L2412:1, S0374:1, H0520:1, S0126:1, H0648:1, H0710:1, H0522:1, H0696:1, H0555:1, H0436:1, S0392:1, S0312:1, L0742:1, L0745:1, L0747:1, L0749:1, L0777:1, L0593:1, L0366:1, S0026:1, S0242:1, S0276:1, S0196:1, H0543:1, H0423:1, S0460:1, L3357:1 and L3372:1.

120	HFCFD04	824057	130	170 - 217	533	AR218:174, AR219:161, AR096:104, AR104:102, AR316:93, AR089:90, AR282:89, AR277:88, AR283:80, AR313:79, AR240:79, AR039:74, AR299:71, AR300:65, AR185:65, AR060:55, AR055:48 H0009:1
121	HFEAY59	658685	131	154 - 276	534	AR055:5, AR277:5, AR283:5, AR060:4, AR282:4, AR104:4, AR300:3, AR240:3, AR316:2, AR039:2, AR089:2, AR096:2, AR218:2, AR185:2, AR219:1, AR299:1 H0081:2 and H0586:1.
122	HFEBO17	852218	132	136 - 219	535	AR089:12, AR218:11, AR060:10, AR299:10, AR219:10, AR313:9, AR055:9, AR316:9, AR240:8, AR282:8, AR096:8, AR185:8, AR104:7, AR039:7, AR277:7, AR300:6, AR283:4 L0803:4, L0438:4, L0766:2, L0526:2, H0659:2, S0444:1, S0408:1, H0421:1, H0081:1, H0050:1, S0370:1, L0770:1, L0637:1, L0646:1, L0800:1, L0662:1, L0804:1, L0607:1, L0659:1, L0790:1, L0665:1, L0352:1, H0648:1, H0651:1, S0328:1, H0436:1, L0749:1, L0750:1, L0777:1, L0752:1, L0599:1, S0242:1 and H0422:1.
123	HFGAJ16	580824	133	40 - 135	536	L0747:17, H0617:14, L0740:11, L0750:9, L0752:9, S0360:8, L0751:8, H0265:7, S0344:7, L0748:7, H0545:6, L0438:6, H0539:6, L0757:6, L0591:6, S0278:5, H0618:5, H0081:5, S0142:5, L0662:5, L0766:5, L0665:5, S0406:5, L0742:5, L0758:5, H0713:4, H0717:4, H0551:4, S0440:4, S0144:4, S0002:4, L0769:4, L0768:4, L0659:4, L0783:4, L0809:4, H0670:4, H0521:4, S0418:3, S0410:3, S0045:3, S0046:3, S0474:3, H0052:3, H0083:3, H0494:3, L0640:3, L0775:3, L0776:3, L0532:3, L0663:3, L0741:3, L0743:3, L0744:3, L0439:3, L0753:3, H0716:2, S0134:2, H0650:2, H0483:2, H0255:2, H0663:2, S0356:2, S0444:2, S0476:2, H0431:2, H0333:2, S0346:2, H0546:2, H0046:2, H0510:2, H0424:2, H0165:2, H0673:2, H0124:2, H0135:2, H0040:2, H0059:2, H0131:2, H0646:2, S0426:2, H0529:2, L0763:2, L0643:2, L0374:2, L0648:2, L0767:2, L0794:2, L0774:2, L0378:2, L0653:2, L0666:2, L0664:2, H0144:2, L0565:2, H0435:2, L0731:2, H0445:2, S0436:2, L0596:2, L0581:2, L0601:2, L0603:2, H0423:2, H0352:2, H0556:1, H0224:1, S0040:1, L0785:1, S0116:1, H0341:1, S0212:1, H0484:1, H0661:1, H0662:1, H0402:1, H0458:1, S0358:1, S0376:1, H0580:1, S0132:1, H0351:1, H0443:1, H0370:1, H0586:1, H0587:1, H0492:1, T0109:1, H0013:1, H0427:1, H0156:1, H0004:1, H0253:1, T0048:1, H0318:1, H0581:1, S0049:1, H0204:1, H0596:1, H0597:1, H0178:1, H0023:1, H0014:1, H0071:1, H0375:1, H0687:1, S0250:1, S0003:1, H0688:1, H0039:1, H0405:1, H0628:1, H0181:1, H0606:1, H0090:1, H0038:1, H0272:1, H0413:1, H0623:1, H0100:1, T0041:1, T0042:1, H0429:1, H0560:1, H0561:1, S0352:1, H0509:1, S0150:1, H0142:1, S0210:1, L0369:1, L0646:1, L0800:1, L0764:1, L0771:1, L0626:1, L0387:1, L0375:1, L0806:1, L0805:1, L0655:1, L0657:1, L0517:1, L0542:1, L0526:1, L0518:1, L0384:1, L0382:1, S0428:1, S0374:1, S0148:1, H0520:1, S0126:1, H0683:1, H0658:1, S0330:1, S0380:1, L0602:1, H0518:1, H0696:1, H0631:1, S0314:1, S0027:1, L0754:1, L0786:1, L0755:1, L0759:1, S0031:1, H0707:1, S0434:1, L0587:1, L0592:1, L0599:1, L0608:1, L0593:1, S0011:1, S0192:1, S0242:1, H0543:1, L0469:1, L0698:1, S0424:1, H0293:1 and H0712:1.
124	HFJHZ75	827872	134	700 - 855	537	AR104:25, AR240:22, AR039:20, AR096:18, AR089:17, AR219:15, AR218:15, AR299:14, AR283:13, AR316:12, AR313:12, AR185:11, AR060:10, AR055:9, AR300:8, AR282:8, AR277:7

125	HF1JA29	839206	135	175 - 423	538	<p>H0251:8, L0742:6, L0748:6, L0754:6, H0013:5, L0664:5, L0439:5, S0360:4, S0140:4, H0616:4, H0144:4, H0658:4, L0602:4, L0747:4, L0752:4, L0759:4, S0132:3, H0553:3, L0770:3, L5566:3, L0665:3, H0520:3, H0670:3, S0206:3, L0751:3, L0605:3, S0114:2, S0444:2, S0408:2, S0222:2, H0455:2, H0150:2, H0644:2, S0426:2, H0529:2, L0764:2, L0659:2, L0740:2, L0749:2, L0777:2, L0596:2, H0265:1, H0556:1, H0716:1, H0255:1, S0418:1, S0442:1, S0358:1, H0741:1, H0208:1, H0371:1, L0717:1, H0441:1, H0607:1, H0632:1, H0486:1, L3653:1, H0156:1, L0021:1, S0010:1, S0474:1, H0052:1, H0194:1, L0040:1, H0231:1, H0545:1, L0471:1, H0024:1, L0163:1, S0051:1, H0071:1, H0594:1, S0334:1, H0673:1, H0124:1, H0135:1, T0067:1, H0269:1, H0059:1, S0038:1, H0100:1, T0041:1, S0448:1, H0641:1, H0633:1, H0647:1, L0796:1, L0771:1, L0768:1, L0766:1, L0549:1, L0774:1, L0806:1, L0527:1, L0384:1, L0809:1, L5623:1, L0663:1, H0547:1, S0126:1, H0689:1, H0690:1, H0684:1, H0659:1, H0660:1, H0666:1, H0672:1, H0651:1, H0518:1, S0152:1, H0521:1, S0146:1, H0555:1, H0436:1, H0479:1, S0390:1, S0141:1, S0027:1, S0028:1, L0745:1, L0750:1, L0753:1, L0731:1, L0758:1, S0434:1, S0436:1, L0592:1, H0667:1, S0194:1, L0698:1 and L0462:1.</p>
126	HF1JA68	847074	136	283 - 414	539	<p>AR263:10, AR184:8, AR313:5, AR241:5, AR251:5, AR039:4, AR052:4, AR198:4, AR192:4, AR204:4, AR312:4, AR183:4, AR296:4, AR282:3, AR096:3, AR268:3, AR229:3, AR182:3, AR285:3, AR053:3, AR270:3, AR269:3, AR299:3, AR309:3, AR316:3, AR089:3, AR291:3, AR247:3, AR238:3, AR298:3, AR266:3, AR277:2, AR185:2, AR248:2, AR213:2, AR177:2, AR289:2, AR202:2, AR290:2, AR300:2, AR186:2, AR240:2, AR295:2, AR246:2, AR293:2, AR226:2, AR292:2, AR284:2, AR294:2, AR234:2, AR175:2, AR227:2, AR258:2, AR253:2, AR286:2, AR256:2, AR233:2, AR259:2, AR231:2, AR237:1, AR060:1, AR033:1, AR219:1, AR244:1, AR271:1, AR104:1, AR267:1, AR232:1, AR218:1, AR055:1, L0766:20, L0754:10, L0776:8, L0803:5, L0749:5, H0661:4, L0740:4, L0751:4, L0608:4, L0770:3, L0750:3, L0761:2, L0794:2, L0806:2, L0783:2, L0809:2, L0789:2, L0438:2, S0404:2, L0745:2, L0777:2, L0755:2, L0758:2, S0134:1, H0638:1, S0358:1, S0408:1, S0045:1, S0046:1, H0581:1, H0023:1, H0355:1, S0214:1, L0055:1, H0477:1, L0796:1, L3905:1, L0772:1, L0646:1, L0800:1, L0642:1, L0764:1, L0773:1, L0363:1, L0768:1, L0804:1, L0774:1, L0805:1, L0655:1, L0807:1, L0526:1, L0531:1, H0689:1, S0378:1, S0152:1, S0406:1, H0732:1, L0742:1, L0748:1, L0747:1, L0753:1, L0757:1, S0194:1, H0422:1 and S0424:1.</p> <p>AR241:47, AR313:34, AR039:26, AR089:24, AR198:24, AR192:23, AR204:18, AR183:17, AR299:16, AR229:16, AR218:16, AR096:15, AR185:15, AR300:14, AR271:14, AR275:14, AR240:13, AR247:13, AR243:12, AR238:12, AR194:12, AR316:12, AR258:12, AR226:12, AR219:11, AR177:11, AR293:11, AR274:10, AR175:10, AR273:10, AR277:10, AR233:9, AR312:9, AR280:9, AR234:9, AR104:9, AR315:9, AR292:8, AR269:8, AR231:8, AR205:8, AR314:7, AR060:7, AR295:7, AR265:7, AR237:7, AR053:7, AR179:7, AR186:7, AR270:7, AR281:7, AR052:7, AR267:6, AR268:6, AR227:6, AR294:6, AR249:6, AR202:6, AR033:6, AR182:6, AR184:6, AR246:6, AR259:6, AR256:5, AR213:5, AR282:5, AR232:4, AR206:4, AR309:4, AR253:4, AR310:4, AR296:4, AR251:4, AR055:3, AR290:3, AR248:3, AR291:3, AR286:3, AR285:2, AR298:2, AR263:2, AR289:2, AR061:2, AR244:2, AR284:2, AR283:2,</p>



127	HFKE05	827572	137	243 - 371	540	AR266:1 S0194:1 L0777:7, S0358:5, L0439:5, L0751:5, H0135:4, H0265:3, H0556:3, L0770:3, L0769:3, L0662:3, L0768:3, L0731:3, H0305:2, H0083:2, L0142:2, S0208:2, S0002:2, L0663:2, L0665:2, H0521:2, L0741:2, L0747:2, L0779:2, H0543:2, H0149:1, H0657:1, S0116:1, S0001:1, H0663:1, S0356:1, S0354:1, H0580:1, S0045:1, H0549:1, S0014:1, H0309:1, H0085:1, H0234:1, H0597:1, H0544:1, H0546:1, H0123:1, H0012:1, H0024:1, H0356:1, H0594:1, T0006:1, H0424:1, H0644:1, H0182:1, H0617:1, L0055:1, H0673:1, H0169:1, H0038:1, H0040:1, H0100:1, L0351:1, T0041:1, H0561:1, H0132:1, L0763:1, L0638:1, L0637:1, L0372:1, L0765:1, L0648:1, L0649:1, L0774:1, L0375:1, L0807:1, L0545:1, L0529:1, L0788:1, L0666:1, L0664:1, S0374:1, H0691:1, H0658:1, H0670:1, H0666:1, S0044:1, S0028:1, L0744:1, L0749:1, L0755:1, L0758:1, H0445:1, S0436:1, L0593:1 and H0352:1.
128	HFKEU12	634006	138	6 - 173	541	AR055:9, AR219:7, AR060:7, AR282:6, AR277:5, AR039:5, AR104:5, AR313:5, AR300:5, AR218:4, AR299:4, AR283:4, AR240:4, AR089:4, AR316:4, AR096:3, AR185:3 H0012:2 and L0805:1.
129	HFKEFX64	566835	139	127 - 171	542	AR273:15, AR244:9, AR274:9, AR192:9, AR184:8, AR186:8, AR204:8, AR052:7, AR243:7, AR202:7, AR269:7, AR271:6, AR198:6, AR206:6, AR312:6, AR246:6, AR247:6, AR241:5, AR213:5, AR275:5, AR309:5, AR253:5, AR061:5, AR055:5, AR267:5, AR182:5, AR060:5, AR268:4, AR053:4, AR282:4, AR205:4, AR194:4, AR185:4, AR033:3, AR183:3, AR277:3, AR270:3, AR240:3, AR266:3, AR310:3, AR104:3, AR291:3, AR313:3, AR248:3, AR219:3, AR249:3, AR265:3, AR251:3, AR300:3, AR295:2, AR229:2, AR237:2, AR294:2, AR299:2, AR218:2, AR293:2, AR233:2, AR238:2, AR283:2, AR292:2, AR175:2, AR226:2, AR316:2, AR039:2, AR089:2, AR227:2, AR296:2, AR231:2, AR234:2, AR289:2, AR096:2, AR298:2, AR177:2, AR286:1, AR259:1, AR256:1, AR179:1, AR263:1 H0012:3 and L0809:1.
130	HFPDS07	821646	140	2546 - 2623	543	AR060:37, AR104:33, AR299:19, AR039:13, AR316:12, AR313:11, AR185:11, AR055:10, AR096:10, AR277:9, AR218:8, AR240:7, AR089:7, AR300:6, AR282:5, AR283:4, AR219:2 L0803:24, L0439:13, H0052:5, L0804:5, L0774:5, H0090:4, L0659:4, H0521:4, L0751:4, S0222:3, H0486:3, H0622:3, L0766:3, H0144:3, S0126:3, H0656:2, S0360:2, H0580:2, H0575:2, S0346:2, H0046:2, L0455:2, S0036:2, H0623:2, S0002:2, L0775:2, L0607:2, L0790:2, L0438:2, L0748:2, L0740:2, L0752:2, L0757:2, L0759:2, H0422:2, H0222:1, L3659:1, S0418:1, S0356:1, H0437:1, H0587:1, H0590:1, S0010:1, S0665:1, S0049:1, H0263:1, H0572:1, H0562:1, H0569:1, H0051:1, H0275:1, S0628:1, S0003:1, H0252:1, H0400:1, H0591:1, H0551:1, H0264:1, H0488:1, H0056:1, L0351:1, L0370:1, S0438:1, S0422:1, L0637:1, L0646:1, L0662:1, L0809:1, L0647:1, L0367:1, L0666:1, L0665:1, H0701:1, L3824:1, H0547:1, H0648:1, S0152:1, H0522:1, S0406:1, H0436:1, S0028:1, L0777:1, L0755:1, L0758:1, S0260:1, S0436:1, L0366:1, S0196:1 and H0542:1.
131	HFRAB10	745380	141	203 - 340	544	AR104:22, AR055:8, AR282:8, AR218:7, AR060:7, AR219:6, AR185:6, AR283:5, AR240:5, AR300:5, AR299:5, AR277:5, AR089:4, AR316:4, AR096:4, AR039:3, AR313:3

132	HFTBM38	638338	142	577 - 669	545	L0439:14, L0438:6, L0794:4, L0770:3, S0222:2, H0271:2, L0776:2, L0756:2, L0758:2, S0001:1, S0278:1, H0441:1, S0010:1, H0052:1, S0050:1, S0366:1, T0042:1, L0662:1, S0428:1, L0352:1, H0547:1 and L0780:1
						AR185:7, AR089:5, AR055:5, AR104:4, AR218:3, AR060:3, AR299:3, AR316:3, AR277:3, AR300:2, AR240:2, AR282:2, AR039:2, AR096:2, AR313:2, AR283:1, AR219:1 L0439:14, H0052:9, L0770:3, H0544:2, L0769:2, L0650:2, L0438:2, L0742:2, L0779:2, L0758:2, S0040:1, H0581:1, H0009:1, H0567:1, H0123:1, H0266:1, H0687:1, H0433:1, H0100:1, S0002:1, L0369:1, L0640:1, L0639:1, L0637:1, L5575:1, L5565:1, L0764:1, L0521:1, L0794:1, L0803:1, L0653:1, L0655:1, L0647:1, L0367:1, L5623:1, L0790:1, L0663:1, L0665:1, H0670:1, S0406:1, H0479:1, L0743:1, L0751:1, L0747:1, L0749:1, S0434:1, H0665:1 and H0352:1
133	HFVGK35	731868	143	14 - 31	546	AR313:56, AR039:46, AR299:32, AR277:31, AR185:26, AR219:24, AR089:24, AR218:24, AR096:24, AR316:22, AR104:20, AR283:17, AR240:17, AR300:16, AR055:14, AR282:13, AR060:12 L0766:2, S0376:1, S0444:1, H0393:1, H0411:1, H0333:1, L0021:1, H0373:1, H0688:1, L0142:1, H0087:1, L0520:1, L0769:1, L0803:1, L0664:1, L0665:1, H0436:1, L0748:1, L0747:1, L0779:1, L0759:1 and H0217:1
134	HFXBN86	866174	144	149 - 346	547	AR253:9, AR252:5, AR250:4, AR176:4, AR162:4, AR055:4, AR161:4, AR163:3, AR215:3, AR168:3, AR060:3, AR171:3, AR242:3, AR261:3, AR223:3, AR286:3, AR269:3, AR272:3, AR264:3, AR282:3, AR165:3, AR236:2, AR164:2, AR053:2, AR104:2, AR270:2, AR254:2, AR266:2, AR225:2, AR311:2, AR174:2, AR268:2, AR178:2, AR181:2, AR182:2, AR224:2, AR283:2, AR239:2, AR263:2, AR240:2, AR193:2, AR299:2, AR293:2, AR177:2, AR233:2, AR296:2, AR228:2, AR231:2, AR201:2, AR089:2, AR061:2, AR237:2, AR287:2, AR173:2, AR190:2, AR234:2, AR274:2, AR183:2, AR166:2, AR175:2, AR191:2, AR185:2, AR197:2, AR316:2, AR214:2, AR229:2, AR096:2, AR200:1, AR309:1, AR039:1, AR213:1, AR226:1, AR300:1, AR217:1, AR216:1, AR290:1, AR288:1, AR295:1, AR196:1, AR256:1, AR277:1, AR179:1, AR257:1, AR235:1, AR211:1, AR210:1, AR312:1, AR247:1, AR291:1, AR218:1, AR267:1, AR232:1, AR255:1 S0001:1
135	HFXBT66	580831	145	172 - 252	548	AR313:202, AR039:152, AR300:78, AR299:76, AR096:75, AR277:66, AR185:64, AR089:63, AR316:53, AR104:50, AR219:44, AR218:43, AR240:36, AR282:31, AR060:29, AR055:16, AR283:14 S0001:1
136	HFXFZ46	600361	146	258 - 278	549	AR218:9, AR219:9, AR185:2, AR039:2, AR104:1, AR055:1, AR060:1 S0001:1
137	HGBER72	826710	147	43 - 102	550	AR313:68, AR039:56, AR299:36, AR185:31, AR096:30, AR300:28, AR277:27, AR089:27, AR219:25, AR316:22, AR218:21, AR104:20, AR282:17, AR060:15, AR240:14, AR055:11, AR283:7 L0766:12, H0436:9, H0543:8, L0769:6, L0749:6, L0731:6, H0556:5, L0655:5, S0434:5, L0439:4, L0758:4, S0114:3, H0255:3, L3904:3, L0794:3, L0776:3, L0659:3, L0783:3, L0809:3, L0751:3, H0423:3, S0358:2, S0360:2, S0007:2, H0549:2, H0550:2, H0486:2, H0014:2, S0388:2, H0424:2,

						<p>H0031:2, H0628:2, L5575:2, L0771:2, L0662:2, L0791:2, L0793:2, L2265:2, L0438:2, S0328:2, L0740:2, L0756:2, H0265:1, H0686:1, S0134:1, H0657:1, H0656:1, S0001:1, S0418:1, L0619:1, S0442:1, S0408:1, H0730:1, H0749:1, H0619:1, H0351:1, S0222:1, H0592:1, H0586:1, T0060:1, H0250:1, H0618:1, H0318:1, H0052:1, H0251:1, H0545:1, H0569:1, H0012:1, H0201:1, S0628:1, H0288:1, H0622:1, T0023:1, L0483:1, H0604:1, S0036:1, H0135:1, H0040:1, H0264:1, S0039:1, L0640:1, L0763:1, L0770:1, L0761:1, L0648:1, L0521:1, L0533:1, L0774:1, L0775:1, L0376:1, L0378:1, L0629:1, L5623:1, L0666:1, L0664:1, S0310:1, L3811:1, H0689:1, H0659:1, H0660:1, H0648:1, H0696:1, H0576:1, S0028:1, L0742:1, L0750:1, L0779:1, L0777:1, L0752:1, L0591:1, L0601:1, H0542:1 and H0506:1.</p>
138	HGBEY14	658691	148	233 - 352	551	<p>AR282:4, AR313:2, AR299:1, AR096:1, AR283:1, AR300:1, AR060:1, AR089:1  L0766:9, L0803:8, L0777:4, L0770:3, H0411:2, H0012:2, L0809:2, L0793:2, L0747:2, H0620:1, H0014:1, H0087:1, L0662:1, L0794:1, L0776:1, L0791:1, L0666:1, L0665:1, H0435:1, H0627:1, L0749:1, L0779:1, L0731:1, L0758:1, H0445:1, S0026:1 and H0667:1.</p>
139	HGBGN34	648659	149	280 - 426	552	<p>AR240:13, AR060:11, AR055:10, AR218:7, AR096:7, AR185:7, AR282:7, AR089:6, AR283:6, AR300:6, AR299:6, AR104:5, AR316:5, AR277:4, AR313:3, AR039:3, AR219:2  L0747:5, H0716:2, S0280:2, H0662:1, S0444:1, H0441:1, H0492:1, T0001:1, H0014:1, H0030:1, H0674:1, L5575:1, L0659:1, S0330:1, L0752:1 and S0436:1.</p>
140	HGLBG15	701990	150	191 - 271	553	<p>AR055:14, AR162:7, AR161:7, AR163:7, AR104:6, AR060:6, AR218:6, AR191:6, AR089:6, AR197:6, AR261:6, AR269:5, AR170:5, AR176:5, AR165:5, AR185:5, AR188:5, AR164:5, AR189:5, AR291:5, AR166:5, AR246:5, AR190:5, AR096:5, AR257:4, AR240:4, AR288:4, AR309:4, AR272:4, AR316:4, AR275:4, AR270:4, AR175:4, AR290:4, AR274:4, AR053:4, AR219:4, AR289:4, AR264:4, AR255:4, AR199:4, AR268:4, AR204:4, AR286:4, AR271:4, AR039:4, AR205:3, AR173:3, AR196:3, AR233:3, AR287:3, AR262:3, AR215:3, AR267:3, AR300:3, AR200:3, AR177:3, AR296:3, AR181:3, AR283:3, AR299:3, AR295:3, AR239:3, AR311:3, AR282:3, AR297:3, AR174:3, AR285:3, AR294:3, AR293:3, AR168:3, AR201:3, AR238:3, AR235:3, AR217:3, AR313:3, AR198:3, AR312:3, AR258:3, AR203:3, AR178:3, AR254:3, AR211:2, AR263:2, AR247:2, AR193:2, AR237:2, AR266:2, AR277:2, AR256:2, AR182:2, AR171:2, AR210:2, AR250:2, AR260:2, AR195:2, AR172:2, AR207:2, AR236:2, AR232:2, AR221:2, AR226:2, AR224:2, AR216:1, AR179:1, AR033:1, AR061:1, AR252:1  L0803:19, S0474:17, L0748:13, S0408:11, H0351:11, L2669:11, L2504:10, L0770:10, L0805:9, L0439:9, L0754:9, S0422:8, L0809:8, L0794:6, L0755:6, L0731:6, L0758:6, S0360:5, H0265:4, S0414:4, H0581:4, H0271:4, L0771:4, L0804:4, L0776:4, L0659:4, L0666:4, L0749:4, L0591:4, H0327:3, L0806:3, L0655:3, L0636:3, L0565:3, H0436:3, L0777:3, S0434:3, S0436:3, S0412:3, S0116:2, S0212:2, H0661:2, S0358:2, S0132:2, L3388:2, S0222:2, H0123:2, H0266:2, S0003:2, H0031:2, H0551:2, L0598:2, L0638:2, L0662:2, L0766:2, L0650:2, L0664:2, L0665:2, S0374:2, H0547:2, H0435:2, H0660:2, S0378:2, L0740:2, L0750:2, L0756:2, L0752:2, H0624:1, H0556:1, S0040:1, H0295:1, S0114:1, H0656:1, L2904:1, S0001:1, H0671:1, S0356:1, S0442:1, S0376:1, S0444:1, H0675:1, H0730:1, H0741:1, H0208:1, S0045:1, S0476:1, H0393:1, H0550:1, H0431:1,</p>

141	HHEGS55	858372	151	159 - 269	554	<p>H0586:1, H0642:1, L3499:1, H0013:1, H0069:1, H0635:1, H0427:1, H0156:1, L0021:1, H0042:1, T0082:1, H0590:1, S0010:1, H0318:1, H0251:1, H0596:1, L0040:1, H0545:1, H0457:1, H0009:1, N0006:1, L0471:1, H0024:1, H0051:1, H0083:1, H0061:1, S0316:1, H0687:1, H0688:1, H0644:1, H0617:1, H0591:1, H0038:1, H0040:1, H0616:1, H0264:1, H0100:1, H0561:1, S0440:1, L2270:1, S0426:1, H0529:1, L0763:1, L0637:1, L0761:1, L0373:1, L0646:1, L0800:1, L0764:1, L0626:1, L0653:1, L0606:1, L0661:1, L0515:1, L5622:1, L0789:1, L0792:1, L0793:1, L0663:1, L2653:1, L2257:1, L2259:1, L2261:1, L2654:1, H0144:1, L0438:1, H0520:1, H0519:1, H0659:1, H0658:1, S0328:1, S0330:1, S0380:1, H0710:1, H0521:1, H0522:1, H0696:1, S0044:1, S0406:1, S0027:1, L0742:1, L0744:1, L0751:1, L0745:1, L0747:1, L0779:1, L0780:1, L0757:1, L0759:1, S0031:1, S0260:1, L0596:1, L0605:1, L0595:1, S0026:1, S0192:1, S0242:1, H0542:1, H0543:1, S0042:1 and S0462:1.</p> <p>AR039:82, AR313:78, AR300:45, AR096:42, AR277:41, AR185:40, AR299:37, AR089:37, AR104:29, AR316:28, AR240:24, AR219:20, AR218:19, AR282:17, AR060:16, AR055:8, AR283:7</p> <p>H0542:5</p>
142	HHEOW19	886174	152	183 - 377	555	<p>AR169:30, AR089:25, AR207:25, AR308:25, AR214:24, AR263:24, AR165:24, AR264:24, AR164:23, AR161:23, AR168:23, AR222:23, AR171:22, AR283:22, AR166:22, AR162:22, AR311:21, AR163:21, AR096:21, AR223:21, AR213:19, AR104:19, AR316:19, AR219:19, AR218:18, AR217:18, AR312:18, AR212:18, AR225:17, AR309:17, AR282:17, AR313:17, AR039:17, AR272:17, AR299:16, AR216:16, AR060:15, AR172:15, AR274:15, AR053:15, AR170:15, AR240:14, AR055:14, AR185:14, AR195:13, AR277:13, AR197:13, AR235:13, AR295:12, AR192:12, AR224:12, AR296:11, AR297:11, AR246:11, AR285:10, AR198:10, AR245:10, AR293:10, AR252:10, AR288:10, AR205:10, AR300:10, AR221:9, AR242:9, AR287:9, AR201:9, AR247:9, AR253:9, AR033:9, AR266:9, AR215:9, AR275:8, AR291:8, AR174:8, AR261:8, AR193:8, AR243:8, AR271:8, AR177:8, AR270:8, AR254:8, AR289:7, AR236:7, AR286:7, AR175:6, AR204:6, AR269:6, AR189:6, AR294:6, AR180:6, AR178:5, AR250:5, AR183:5, AR199:5, AR257:5, AR181:5, AR179:5, AR268:5, AR262:5, AR173:5, AR290:5, AR258:5, AR255:4, AR061:4, AR210:4, AR191:4, AR190:4, AR229:4, AR196:4, AR176:4, AR188:3, AR226:3, AR239:3, AR182:3, AR200:3, AR234:3, AR238:3, AR267:3, AR232:3, AR230:3, AR203:3, AR256:3, AR231:3, AR211:3, AR237:3, AR233:2, AR227:2, AR260:2, AR228:1</p> <p>L0748:4, L0745:4, L0775:3, L0776:3, L0758:3, H0458:2, H0050:2, S0003:2, H0529:2, L0764:2, L0747:2, L0599:2, L0362:2, H0556:1, S0116:1, S0282:1, H0662:1, H0305:1, S0420:1, S0444:1, H0329:1, H0351:1, H0411:1, S0278:1, H0438:1, T0039:1, H0635:1, H0156:1, H0235:1, H0327:1, L0471:1, H0428:1, H0031:1, H0644:1, H0032:1, S0366:1, H0038:1, H0616:1, T0067:1, H0477:1, H0059:1, H0560:1, H0625:1, S0422:1, L0769:1, L0761:1, L0667:1, L0771:1, L0662:1, L0806:1, L0655:1, L0809:1, L5622:1, L0789:1, L0790:1, L0665:1, S0052:1, H0144:1, H0520:1, H0547:1, H0519:1, H0435:1, H0539:1, S0044:1, S0392:1, L0754:1, L0749:1, L0750:1, L0779:1, L0755:1, L0759:1, S0434:1, L0608:1, H0543:1 and S0452:1.</p> <p>AR055:11, AR104:8, AR060:8, AR218:7, AR277:7, AR096:6, AR300:6, AR219:6, AR299:5, AR089:5,</p>
143	HHFEC39	609873	153	1211 - 1216	556	

144	HHFFF87	778071	154	229 - 354	557	<p>AR283:5, AR316:5, AR240:5, AR039:5, AR185:4, AR282:3, AR313:3  L0805:21, L0776:19, L0751:14, L0759:13, L0770:11, H0615:8, L0803:8, L0438:7, L0439:7, L0758:7,  L0769:6, L0521:6, L0754:6, H0624:5, H0486:5, L0500:5, L0807:5, L0740:5, L0591:5, H0716:4,  H0351:4, L0774:4, H0144:4, S0328:4, L0748:4, L0745:4, L0604:4, S0414:3, H0013:3, S0250:3,  H0428:3, H0644:3, H0591:3, L0659:3, L0783:3, L0809:3, L0791:3, L0793:3, L0666:3, H0670:3,  L0779:3, L0777:3, L0731:3, H0583:2, S0408:2, L0717:2, S0280:2, S0010:2, H0052:2, H0024:2,  T0010:2, H0594:2, H0266:2, H0031:2, H0032:2, T0067:2, L0796:2, L0662:2, L0794:2, L0806:2,  L0518:2, L0792:2, L3643:1, S0342:1, L0002:1, H0657:1, H0255:1, H0305:1, H0728:1, H0733:1,  H0734:1, S0007:1, H0645:1, H0640:1, H0369:1, H0261:1, H0549:1, H0550:1, S0222:1, H0586:1,  T0040:1, L3655:1, L0021:1, L0022:1, L0105:1, T0071:1, L0109:1, H0194:1, H0263:1, H0566:1,  H0050:1, L0471:1, H0051:1, S0051:1, S0024:1, H0355:1, H0510:1, H0271:1, H0328:1, H0039:1,  H0622:1, L0483:1, H0124:1, S0036:1, H0038:1, H0616:1, H0412:1, H0059:1, H0100:1, H0646:1,  S0422:1, S0002:1, H0743:1, H0529:1, L0520:1, L0640:1, L0763:1, L0773:1, L0364:1, L0649:1,  L0497:1, L0526:1, L0788:1, L0789:1, L0663:1, L0665:1, S0374:1, H0780:1, H0547:1, S0126:1,  H0689:1, H0648:1, S0330:1, S0378:1, H0522:1, S0037:1, L0747:1, L0750:1, L0780:1, L0752:1,  H0595:1, S0434:1, L0608:1, L0594:1, L0361:1, L0603:1, S0026:1, S0192:1, S0194:1, H0423:1,  S0398:1, S0460:1, H0506:1, H0008:1 and H0352:1.</p> <p>AR089:36, AR316:33, AR281:33, AR313:33, AR218:32, AR283:32, AR096:31, AR315:30, AR219:30,  AR104:29, AR240:28, AR282:28, AR314:27, AR299:27, AR039:27, AR183:27, AR277:26, AR296:26,  AR269:26, AR280:26, AR263:26, AR291:26, AR060:25, AR289:25, AR310:23, AR295:23, AR055:23,  AR265:23, AR290:23, AR266:23, AR213:23, AR247:22, AR185:22, AR270:22, AR175:21, AR268:21,  AR033:21, AR284:21, AR285:20, AR256:20, AR177:20, AR300:20, AR292:19, AR267:19, AR298:19,  AR053:19, AR182:19, AR231:18, AR312:18, AR293:18, AR294:17, AR052:17, AR259:16, AR286:16,  AR309:16, AR232:16, AR238:16, AR258:15, AR253:15, AR184:14, AR251:14, AR249:14, AR248:14,  AR234:14, AR179:14, AR226:12, AR229:12, AR237:12, AR205:11, AR061:10, AR233:10, AR227:9,  AR244:9, AR206:7, AR246:7, AR275:7, AR273:6, AR202:6, AR194:5, AR271:5, AR274:5, AR198:5,  AR192:5, AR186:4, AR241:4, AR243:3  L0748:18, L0747:14, L0749:12, L0731:12, L0766:10, L0771:9, L0809:9, L0666:7, L0754:7, H0556:6,  L0775:6, L0665:6, L0751:6, L0663:5, S0380:5, L0439:5, L0750:5, L0755:5, H0333:4, H0597:4,  H0024:4, H0039:4, H0551:4, H0413:4, L0769:4, L0662:4, L0794:4, L0649:4, L0783:4, L0742:4,  L0759:4, L0596:4, L0591:4, H0624:3, S0356:3, H0156:3, S0010:3, H0328:3, H0553:3, H0038:3,  H0494:3, H0633:3, L0637:3, L0776:3, L0659:3, L0438:3, H0658:3, S0406:3, L0740:3, L0745:3,  L0777:3, L0752:3, H0265:2, H0661:2, L3659:2, S0418:2, S0442:2, S0354:2, S0444:2, S0360:2,  S0045:2, L0717:2, S0222:2, H0331:2, H0013:2, H0581:2, H0052:2, H0012:2, H0620:2, H0014:2,  H0051:2, S0214:2, H0030:2, H0673:2, H0135:2, T0067:2, H0412:2, S0440:2, H0529:2, L0770:2,  L0761:2, L0803:2, L0805:2, L0655:2, S0374:2, H0520:2, H0696:2, L0757:2, L0758:2, S0436:2,  L0588:2, S0192:2, H0542:2, L3643:1, H0685:1, S0114:1, S0134:1, H0657:1, H0341:1, S0212:1,</p>
-----	---------	--------	-----	-----------	-----	--

						S0001:1, H0669:1, H0662:1, S0420:1, H0676:1, S0408:1, H0637:1, H0580:1, H0208:1, S0476:1, H0619:1, H0393:1, L3388:1, S6014:1, H0357:1, H0642:1, H0486:1, H0042:1, H0575:1, S0346:1, H0318:1, S0474:1, H0263:1, H0204:1, H0327:1, H0545:1, H0041:1, H0009:1, H0050:1, L0471:1, L0163:1, S0051:1, H0083:1, H0355:1, H0594:1, H0271:1, H0416:1, H0687:1, S0314:1, H0688:1, H0428:1, H0622:1, T0023:1, L0483:1, H0644:1, H0628:1, H0617:1, H0090:1, H0040:1, H0264:1, H0059:1, H0100:1, L0564:1, S0150:1, H0646:1, S0422:1, L0520:1, L0638:1, L0796:1, L3905:1, L5566:1, L0646:1, L0764:1, L0521:1, L0363:1, L0768:1, L0650:1, L0774:1, L0375:1, L0651:1, L0606:1, L0807:1, L0656:1, L0382:1, L0529:1, L0788:1, L0664:1, L0352:1, H0519:1, H0690:1, H0435:1, H0660:1, H0666:1, H0672:1, H0651:1, S0330:1, H0539:1, H0752:1, S0152:1, H0521:1, H0522:1, H0436:1, S3014:1, S0027:1, L0744:1, L0756:1, L0779:1, L0780:1, L0753:1, H0445:1, L0485:1, L0581:1, L0608:1, L0366:1, H0653:1 and S0276:1.
145	HHFFL34	753230	155	42 - 713	558	AR265:3, AR183:3, AR184:3, AR248:3, AR309:2, AR310:2, AR269:2, AR206:1, AR282:1, AR267:1, AR270:1, AR295:1, AR277:1, AR186:1, AR205:1 H0599:3, L0766:3, S0037:3, H0556:2, H0242:2, H0620:2, H0543:2, H0170:1, T0002:1, H0300:1, S0360:1, S0045:1, S0476:1, H0549:1, H0309:1, H0545:1, H0081:1, H0050:1, S0388:1, H0644:1, T0041:1, S0144:1, H0529:1, H0026:1, L0659:1, L2261:1, H0520:1, S0126:1, H0539:1, L0602:1, S0152:1, S0044:1, H0436:1, S3014:1, S0027:1, L0779:1, L0731:1 and S0424:1.
146	HHFFS40	824059	156	37 - 180	559	AR219:22, AR277:18, AR283:17, AR218:16, AR039:15, AR282:15, AR089:14, AR316:13, AR313:13, AR096:12, AR299:12, AR104:12, AR240:10, AR055:10, AR300:10, AR185:9, AR060:8 S0422:7, L0748:6, L0591:6, L0766:5, L0754:5, H0423:5, S0408:4, H0069:4, L0803:4, L0602:4, H0657:3, S0442:3, S0046:3, H0596:3, S0003:3, H0032:3, H0169:3, H0674:3, L0662:3, L0794:3, L0526:3, H0670:3, L0740:3, L0759:3, S0134:2, S0212:2, H0661:2, S0444:2, H0046:2, L0471:2, H0355:2, H0038:2, H0100:2, L0564:2, S0440:2, H0529:2, L0770:2, L0769:2, L0667:2, L0771:2, L0521:2, L0804:2, L0805:2, L0384:2, L0809:2, L0665:2, H0659:2, L0743:2, L0750:2, L0731:2, S0436:2, L0592:2, L0599:2, L0608:2, L0362:2, H0171:1, H0556:1, H0686:1, H0713:1, H0717:1, H0738:1, H0740:1, H0632:1, H0663:1, H0662:1, H0402:1, S0356:1, H0742:1, H0730:1, H0747:1, S0222:1, H0574:1, H0632:1, H0486:1, H0013:1, H0581:1, S0049:1, H0052:1, H0194:1, H0309:1, H0263:1, H0123:1, H0050:1, H0373:1, H0510:1, S6028:1, H0266:1, H0615:1, L0483:1, H0644:1, L0143:1, H0708:1, H0135:1, H0163:1, H0090:1, H0616:1, T0067:1, H0488:1, H0412:1, H0059:1, H0494:1, S0382:1, S0306:1, S0450:1, H0509:1, H0641:1, H0647:1, H0646:1, L0520:1, L0763:1, L0637:1, L0373:1, L0363:1, L5564:1, L0775:1, L0375:1, L0651:1, L0655:1, L0661:1, L0527:1, L0656:1, L0659:1, L0518:1, L0532:1, L0663:1, L0664:1, S0374:1, H0682:1, H0658:1, H0660:1, H0672:1, H0539:1, H0521:1, S0044:1, S0406:1, H0478:1, L0744:1, L0439:1, L0747:1, L0779:1, L0777:1, L0758:1, L0480:1, L0595:1, H0667:1, S0192:1, S0194:1, S0196:1, H0422:1 and S0424:1.
147	HHGCS78	634605	157	290 - 364	560	AR277:76, AR283:71, AR219:57, AR218:56, AR316:56, AR089:52, AR313:52, AR240:51, AR055:45, AR282:45, AR299:44, AR104:41, AR096:41, AR185:34, AR039:33, AR060:31, AR300:30 L0770:7, H0333:3, L0783:2, L0731:2, H0445:2, S0418:1, H0741:1, S0002:1, L0369:1, L0643:1,

						L0764:1, L0794:1, L0803:1, L0775:1, L0375:1, L0378:1, L0655:1, L0809:1, L0666:1, L0664:1, L0754:1, L0747:1, L0749:1, L0752:1 and L0591:1.
148	HHGDT26	658692	158	181 - 207	561	L0748:2, S0218:1, H0333:1, H0271:1, S0210:1, L0776:1, S0188:1, L0745:1 and H0423:1.
149	HHPFU28	824573	159	156 - 239	562	AR218:11, AR039:9, AR219:9, AR104:8, AR300:8, AR185:7, AR055:6, AR299:6, AR089:6, AR096:6, AR240:6, AR060:5, AR282:5, AR316:5, AR313:4, AR277:3, AR283:3 L0622:2, L0518:2, L0382:2, L0663:2, L0750:2, L0752:2, L0362:2, S0114:1, S0420:1, S0354:1, S0444:1, S0222:1, S0010:1, H0046:1, H0051:1, L0483:1, H0644:1, H0412:1, H0529:1, L0794:1, L0561:1, L0666:1, S0330:1, S0028:1, L0779:1, L0777:1, L0758:1, S0031:1, H0444:1 and L0592:1.
150	HHSBI65	801910	160	62 - 229	563	AR176:10, AR216:9, AR217:8, AR168:8, AR169:8, AR182:8, AR161:8, AR196:8, AR162:8, AR214:8, AR228:8, AR269:8, AR231:8, AR233:7, AR171:7, AR207:7, AR229:7, AR181:7, AR223:7, AR163:7, AR198:7, AR165:7, AR172:7, AR225:7, AR267:7, AR224:7, AR266:6, AR268:6, AR170:6, AR164:6, AR237:6, AR221:6, AR222:6, AR177:6, AR179:6, AR235:6, AR270:6, AR183:6, AR204:6, AR288:6, AR053:6, AR239:6, AR193:5, AR236:5, AR191:5, AR264:5, AR293:5, AR296:5, AR055:5, AR238:5, AR247:5, AR309:5, AR300:5, AR178:5, AR295:5, AR290:5, AR294:5, AR060:5, AR061:5, AR287:5, AR257:5, AR201:5, AR282:5, AR291:5, AR175:5, AR311:4, AR261:4, AR234:4, AR289:4, AR275:4, AR262:4, AR252:4, AR242:4, AR213:4, AR253:4, AR297:4, AR203:4, AR277:4, AR180:4, AR212:4, AR200:4, AR316:4, AR286:4, AR274:4, AR255:4, AR312:4, AR240:4, AR174:4, AR215:4, AR039:4, AR192:4, AR263:4, AR205:4, AR283:3, AR232:3, AR271:3, AR285:3, AR190:3, AR226:3, AR185:3, AR033:3, AR246:3, AR230:3, AR188:3, AR308:3, AR227:3, AR096:3, AR173:3, AR313:3, AR089:3, AR195:3, AR272:3, AR199:3, AR189:3, AR260:3, AR197:3, AR299:3, AR104:2, AR210:2, AR258:2, AR211:2, AR256:2, AR243:2, AR218:2, AR219:2 L0439:7, L0794:5, L0766:5, S0354:2, H0549:2, S0051:2, S0142:2, L0372:2, L0809:2, L0438:2, H0658:2, H0650:1, H0381:1, S0116:1, S0356:1, S0360:1, H0261:1, H0586:1, H0486:1, H0036:1, H0052:1, L0738:1, H0457:1, H0014:1, H0051:1, H0617:1, H0032:1, H0561:1, S0440:1, H0633:1, L0763:1, L0761:1, L0800:1, L0644:1, L0645:1, L0764:1, L0648:1, L0655:1, L0657:1, L0658:1, L0368:1, L0665:1, L3811:1, S0044:1, S0406:1, H0626:1, L0731:1, S0434:1, S0436:1, H0653:1 and H0423:1.
151	HHSDI53	862028	161	221 - 295	564	AR313:45, AR039:43, AR300:22, AR299:22, AR096:21, AR316:20, AR185:19, AR089:19, AR277:19, AR219:15, AR240:14, AR104:14, AR218:13, AR282:12, AR060:11, AR055:8, AR283:4 L0766:10, L0752:8, L0439:6, L0747:6, L0740:5, L0756:5, S0408:4, L0779:4, L0777:4, L0731:4, S0051:3, H0169:3, L0803:3, L0774:3, L0809:3, L0754:3, S0360:2, H0574:2, S0422:2, L0763:2, L0805:2, L0666:2, L0663:2, L0751:2, L0755:2, L0759:2, L0601:2, H0624:1, S0040:1, H0713:1, S0114:1, S0298:1, S0420:1, S0444:1, H0580:1, H0730:1, H0733:1, L3388:1, H0351:1, H0600:1, H0331:1, H0013:1, L0021:1, H0575:1, H0590:1, T0110:1, H0012:1, H0615:1, H0031:1, H0553:1, H0591:1, S0440:1, H0646:1, S0002:1, L0772:1, L0645:1, L0773:1, L0662:1, L0794:1, L0381:1, L0775:1, L0776:1, L0657:1, L0659:1, L0528:1, L5622:1, L0790:1, H0547:1, H0648:1, H0539:1, S0152:1, H0696:1, S0044:1, S0406:1, S0028:1, L0758:1, S0434:1, S0436:1, S0011:1, S0276:1.

152	HHSFC09	801911	162	380 - 478	565	H0422:1, S0398:1 and S0424:1. L0752:6, L0758:4, L0662:3, L0776:3, L0666:3, L0750:3, L0755:3, H0657:2, H0597:2, H0150:2, H0081:2, S0388:2, H0213:2, H0617:2, L0770:2, L0764:2, L0775:2, L0657:2, L0659:2, L0439:2, L0740:2, L0751:2, L0747:2, H0543:2, H0624:1, H0265:1, H0638:1, H0586:1, S0280:1, H0618:1, H0581:1, H0309:1, H0544:1, L0471:1, H0024:1, S0051:1, H0688:1, H0424:1, H0644:1, L0055:1, H0100:1, L0351:1, H0396:1, S0144:1, L0769:1, L0638:1, L0643:1, L0773:1, L0648:1, L0766:1, L0381:1, L0806:1, L0655:1, L0606:1, L0663:1, H0144:1, H0520:1, H0651:1, L0743:1, L0731:1, L0605:1, L0591:1, L0592:1 and H0542:1.
153	HHSGL28	801912	163	453 - 473	566	L0439:8, L0438:3, S0440:2, L0666:2, H0170:1, S0442:1, H0318:1, S0049:1, H0052:1, H0050:1, H0057:1, S0388:1, S0214:1, H0598:1, S0036:1, H0063:1, H0551:1, L0520:1, L0796:1, L0662:1, L0766:1, L0664:1, H0547:1, H0435:1, H0521:1, L0779:1, L0777:1, L0752:1 and L0594:1.
154	HISBA38	561711	164	169 - 279	567	AR277:1 L0766:3, H0318:1 and H0539:1.
155	HJMAA03	824062	165	527 - 556	568	AR207:12, AR309:11, AR192:11, AR252:10, AR053:9, AR212:9, AR242:9, AR235:9, AR213:8, AR215:8, AR198:8, AR170:8, AR169:8, AR161:8, AR162:8, AR253:8, AR223:8, AR165:8, AR166:8, AR263:7, AR163:7, AR164:7, AR274:7, AR224:7, AR264:7, AR214:7, AR195:7, AR217:7, AR174:7, AR197:7, AR261:7, AR311:7, AR221:7, AR282:6, AR308:6, AR222:6, AR240:6, AR312:6, AR205:6, AR171:6, AR168:6, AR193:6, AR313:6, AR246:6, AR177:6, AR173:6, AR277:6, AR216:6, AR247:6, AR180:6, AR225:6, AR283:5, AR269:5, AR300:5, AR089:5, AR201:5, AR272:5, AR297:5, AR189:5, AR204:5, AR183:5, AR299:5, AR175:5, AR288:5, AR176:5, AR295:5, AR271:5, AR250:5, AR096:5, AR275:5, AR270:4, AR316:4, AR196:4, AR191:4, AR286:4, AR178:4, AR290:4, AR185:4, AR268:4, AR296:4, AR291:4, AR257:4, AR033:4, AR199:4, AR181:4, AR039:4, AR236:4, AR229:4, AR243:4, AR285:4, AR254:4, AR289:4, AR238:3, AR172:3, AR293:3, AR262:3, AR190:3, AR287:3, AR179:3, AR200:3, AR055:3, AR104:3, AR060:3, AR188:3, AR239:3, AR182:3, AR233:3, AR258:3, AR294:3, AR061:3, AR237:3, AR231:3, AR234:3, AR226:3, AR203:3, AR255:3, AR232:3, AR230:2, AR211:2, AR227:2, AR228:2, AR267:2, AR210:2, AR266:2, AR219:2, AR260:1, AR218:1, AR256:1, L0749:8, L0803:5, L0748:5, L0777:5, L0794:4, L0766:4, L0804:4, H0135:3, H0551:3, L0754:3, L0599:3, H0542:3, H0556:2, H0545:2, H0674:2, L0764:2, L0774:2, L0776:2, L0655:2, H0521:2, L0439:2, L0752:2, L0731:2, L0596:2, H0395:1, H0713:1, H0483:1, H0663:1, S0358:1, H0580:1, H0329:1, S0045:1, H0453:1, H0427:1, H0599:1, H0706:1, H0150:1, H0123:1, L0471:1, L0163:1, H0051:1, H0275:1, S0003:1, S0214:1, H0628:1, H0090:1, H0040:1, H0087:1, T0067:1, H0412:1, H0494:1, H0509:1, H0633:1, H0647:1, S0344:1, L0769:1, L0637:1, L0761:1, L0772:1, L0800:1, L0374:1, L0771:1, L0363:1, L0768:1, L0806:1, L0659:1, L0382:1, L0809:1, L0545:1, L0789:1, L0666:1, H0519:1, H0659:1, S0152:1, S0404:1, L0751:1, L0747:1, L0750:1, L0779:1, S0436:1, L0608:1, S0276:1, H0543:1, H0506:1 and H0352:1.
156	HJMAV41	862029	166	207 - 290	569	AR104:44, AR277:28, AR283:16, AR219:12, AR316:12, AR299:10, AR240:10, AR055:9, AR089:9, AR218:9, AR185:9, AR039:9, AR300:8, AR313:8, AR282:8, AR096:8, AR060:7



							L0742:15, L0439:7, S0007:5, L0741:4, H0135:3, L0516:2, H0052:2, L0438:2, L0426:1, H0402:1, H0351:1, S0222:1, H0441:1, H0333:1, H0545:1, S0038:1, L0351:1, L0370:1, L0770:1, L0769:1, L5566:1, L0805:1, L0659:1, L0792:1, L0793:1, H0547:1, L0750:1, L0759:1, L0366:1, H0008:1, H0721:1 and H0352:1.
157	HJ MAY90	793678	167	2492 - 2596	570		AR283:23, AR277:22, AR089:21, AR313:18, AR316:18, AR282:18, AR240:17, AR300:17, AR185:16, AR096:14, AR219:14, AR299:14, AR218:14, AR104:13, AR055:13, AR039:12, AR060:11 L0777:9, L0757:9, L0764:8, L0809:6, L0747:6, H0674:4, L0783:4, L0666:4, L0748:4, L0751:4, L0731:4, L0591:4, L0770:3, L0372:3, L0662:3, L0775:3, L0518:3, H0658:3, L0604:3, H0638:2, S0360:2, L0769:2, L0761:2, L0766:2, L0804:2, L0663:2, H0520:2, S012:2, S0027:2, S0206:2, L0439:2, L0750:2, L0779:2, L0759:2, L0600:2, S024:1, H0295:1, H0341:1, S0001:1, S0356:1, S0376:1, H0580:1, H0735:1, S0222:1, H0455:1, H0574:1, H0632:1, H0427:1, H0599:1, H0318:1, H0052:1, H0263:1, H0231:1, H0546:1, H0545:1, H0009:1, H0620:1, H0083:1, H0687:1, H0252:1, H0615:1, H0029:1, H0032:1, H0673:1, H0135:1, H0100:1, L0564:1, H0641:1, H0646:1, H0652:1, S0426:1, L0640:1, L0638:1, L0667:1, L0772:1, L0800:1, L0768:1, L0784:1, L0805:1, L0655:1, L0659:1, L0517:1, L0526:1, S0052:1, L0438:1, H0682:1, S0330:1, S0380:1, H0521:1, L0740:1, L0786:1, L0780:1, L0752:1, S0436:1, L0605:1, L0599:1, S0026:1 and :1.
158	HJP BE39	801960	168	170 - 226	571		AR214:33, AR171:25, AR217:24, AR223:24, AR225:23, AR168:21, AR170:21, AR172:20, AR215:19, AR216:18, AR169:16, AR237:13, AR224:13, AR222:10, AR233:10, AR238:10, AR239:10, AR221:9, AR061:8, AR228:7, AR231:7, AR257:7, AR165:7, AR089:6, AR218:6, AR164:6, AR163:6, AR162:6, AR285:6, AR161:6, AR166:6, AR210:6, AR286:6, AR269:6, AR294:5, AR247:5, AR055:5, AR309:5, AR297:5, AR234:5, AR316:5, AR275:5, AR229:5, AR312:5, AR287:5, AR181:5, AR190:4, AR179:4, AR270:4, AR240:4, AR282:4, AR104:4, AR175:4, AR199:4, AR300:4, AR060:4, AR258:4, AR173:4, AR293:4, AR180:4, AR291:4, AR219:4, AR189:4, AR205:4, AR299:4, AR182:4, AR193:4, AR243:4, AR255:4, AR283:4, AR200:4, AR204:4, AR311:4, AR295:4, AR203:4, AR289:4, AR290:4, AR242:4, AR262:4, AR185:4, AR176:4, AR254:3, AR250:3, AR188:3, AR227:3, AR288:3, AR296:3, AR313:3, AR264:3, AR268:3, AR174:3, AR201:3, AR053:3, AR096:3, AR177:3, AR261:3, AR178:3, AR232:3, AR236:3, AR308:3, AR260:3, AR235:3, AR277:3, AR191:3, AR197:3, AR213:3, AR226:3, AR183:3, AR253:3, AR263:3, AR267:3, AR211:3, AR246:3, AR033:3, AR212:3, AR195:2, AR196:2, AR039:2, AR256:2, AR266:2, AR271:2, AR230:2, AR192:2, AR207:2, AR272:2, AR198:1 L0375:8, L0809:7, L0794:6, S0410:5, L0803:5, H0309:4, S0003:4, S0422:4, L0592:4, S0358:3, H0747:3, H0251:3, H0494:3, L0065:3, S0438:3, H0529:3, S0378:3, S0044:3, S0406:3, L0439:3, L0751:3, L0747:3, L0731:3, S0436:3, L0608:3, H0685:2, S0114:2, S0408:2, T0008:2, S0278:2, H0497:2, L0622:2, H0046:2, S0050:2, H0083:2, T0006:2, H0166:2, H0413:2, H0625:2, S0144:2, S0344:2, L0369:2, L0763:2, L0800:2, L0764:2, L0768:2, L0499:2, L0804:2, L0775:2, L0376:2, L0518:2, L4508:2, L0666:2, L0663:2, L0438:2, H0518:2, L0750:2, L0777:2, L0753:2, L0755:2, L0758:2, L0759:2, H0445:2, L0591:2, L0599:2, H0624:1, H0170:1, L0615:1, S0134:1, H0650:1, S0116:1, H0306:1, H0402:1, S0420:1, S0356:1, S0376:1, S0444:1, S0360:1, H0580:1, S0007:1,

159	HJPBK28	638191	169	256 - 387	572	S0046:1, H0393:1, L0717:1, H0351:1, H0453:1, H0592:1, H0586:1, S0005:1, H0559:1, L0586:1, H0013:1, S0280:1, H0618:1, T0048:1, H0318:1, H0052:1, H0085:1, H0231:1, H0544:1, H0081:1, S0388:1, S0051:1, H0071:1, H0375:1, H0266:1, H0188:1, S0214:1, L0055:1, H0674:1, L0455:1, H0124:1, H0040:1, T0042:1, H0429:1, S0352:1, S0440:1, S0142:1, H0538:1, S0002:1, L0520:1, L0371:1, L0770:1, L3904:1, L0761:1, L0667:1, L0772:1, L0646:1, L0642:1, L0374:1, L0648:1, L0662:1, L0381:1, L0650:1, L0774:1, L0805:1, L0653:1, L0776:1, L0606:1, L0657:1, L0659:1, L0517:1, L0542:1, L0384:1, L0382:1, L0543:1, L5622:1, L5623:1, L0791:1, L5286:1, L0665:1, L2257:1, L2263:1, L0710:1, L2264:1, T0068:1, H0684:1, H0435:1, H0670:1, H0648:1, H0672:1, H0539:1, H0754:1, H0710:1, S0152:1, H0555:1, H0626:1, S012:1, L0742:1, L0748:1, L0779:1, S0434:1, L0596:1, L0361:1, S0192:1, H0542:1, H0543:1, H0422:1, S0424:1, L3563:1, H0775:1 and H0352:1.
160	HJPC08	840365	170	374 - 727	573	L0794:6, L0439:5, L0759:5, H0556:4, L0771:4, L0770:3, L0643:3, H0144:3, H0156:2, H0188:2, H0090:2, H0641:2, L0662:2, L0766:2, L0803:2, L0776:2, L0661:2, L0659:2, L0790:2, H0522:2, S0436:2, H0295:1, T0049:1, H0583:1, S0116:1, H0663:1, H0662:1, S0356:1, S0376:1, S0132:1, H0586:1, H0587:1, H0486:1, H0575:1, H0748:1, H0744:1, H0309:1, H0231:1, H0083:1, H0271:1, H0286:1, H0622:1, H0031:1, L0455:1, H0068:1, H0063:1, H0551:1, H0264:1, H0268:1, T0041:1, H0494:1, H0633:1, L0637:1, L3905:1, L0800:1, L0775:1, L0806:1, L0383:1, L0809:1, L0666:1, L0663:1, L0664:1, L2264:1, L3827:1, L3828:1, H0519:1, H0593:1, H0435:1, H0672:1, H0436:1, S0027:1, L0740:1, L0749:1, L0731:1, L0757:1, L0758:1, H0136:1, H0423:1 and S0446:1.
161	HKABU43	838573	171	755 - 1600	574	AR277:9, AR055:9, AR218:8, AR060:6, AR219:6, AR283:5, AR300:5, AR104:5, AR240:5, AR316:5, AR185:5, AR313:5, AR299:4, AR089:3, AR096:3, AR039:3, AR282:2 L0758:9, H0618:6, L0794:6, L0749:6, L0774:4, L0748:4, L0750:4, S0418:3, S0358:3, H0266:3, L0770:3, L0766:3, L0759:3, S0360:2, H0150:2, H0087:2, L0369:2, L0769:2, L0771:2, L0789:2, L0663:2, L0665:2, H0422:2, H0556:1, H0295:1, H0370:1, H0331:1, H0013:1, L0021:1, L0022:1, H0253:1, H0052:1, H0204:1, H0544:1, H0012:1, H0620:1, H0024:1, H0083:1, H0510:1, H0416:1, H0252:1, H0424:1, H0617:1, L0564:1, H0494:1, S0144:1, L0372:1, L0646:1, L0800:1, L0641:1, L0764:1, L0649:1, L0803:1, L0650:1, L0775:1, L0776:1, L0655:1, L0659:1, L0809:1, L0666:1, L0664:1, H0144:1, H0521:1, H0436:1, S012:1, L0747:1, L0786:1, L0757:1, L0608:1 and L0595:1.
162	HKACI79	853361	172	207 - 359	575	AR219:2, AR282:1, AR300:1, AR316:1 L0794:7, L0803:3, H0052:2, S0250:2, H0032:2, H0494:2, H0529:2, L0666:2, L0663:2, L0747:2, L0759:2, H0657:1, H0664:1, H0662:1, S0442:1, H0741:1, H0735:1, H0733:1, S0046:1, H0640:1, H0331:1, H0559:1, T0039:1, H0013:1, S0280:1, H0318:1, T0110:1, H0024:1, S0364:1, H0591:1, H0038:1, H0040:1, S0142:1, L0640:1, L0667:1, L0764:1, L0662:1, L0804:1, L0659:1, L0517:1, L0789:1, L4559:1, L0664:1, S0126:1, H0435:1, H0539:1, S0152:1, H0521:1, H0522:1, S0027:1, L0779:1, L0758:1, L0485:1, L0601:1, S0026:1, H0667:1, S0192:1, H0542:1 and H0506:1.
						AR313:63, AR039:48, AR300:33, AR096:31, AR089:31, AR277:26, AR185:25, AR299:24, AR316:20,

163	HKAFF50	790192	173	343 - 495	576	AR240:19, AR218:15, AR219:14, AR282:12, AR104:12, AR060:9, AR055:6, AR283:3 H0659:2, S0418:1, L0004:1, H0041:1, H0087:1, H0494:1, H0646:1, S0422:1, L0373:1, L0766:1, L0665:1, S0380:1, L0748:1, L0740:1 and L0589:1. AR281:19, AR271:17, AR313:15, AR205:15, AR263:15, AR275:15, AR315:15, AR039:14, AR265:14, AR280:13, AR194:13, AR247:12, AR274:12, AR310:12, AR282:12, AR213:11, AR202:11, AR053:11, AR052:11, AR314:11, AR089:11, AR283:10, AR299:10, AR277:10, AR312:10, AR246:10, AR240:10, AR316:10, AR033:10, AR300:10, AR266:10, AR241:9, AR251:9, AR096:9, AR104:9, AR243:9, AR183:8, AR185:8, AR206:8, AR309:8, AR289:7, AR219:7, AR238:7, AR295:7, AR285:7, AR182:7, AR292:7, AR184:7, AR284:7, AR218:7, AR192:7, AR232:7, AR270:7, AR249:6, AR296:6, AR229:6, AR231:6, AR294:6, AR286:6, AR248:6, AR269:6, AR244:6, AR175:6, AR291:6, AR177:6, AR198:6, AR226:6, AR268:6, AR055:6, AR258:5, AR060:5, AR204:5, AR298:5, AR186:5, AR253:5, AR234:5, AR293:5, AR290:5, AR267:4, AR256:4, AR237:4, AR227:4, AR061:4, AR233:4, AR259:3, AR179:3 S0114:1, S0354:1, S0046:1, H0392:1, T0010:1, H0038:1, H0616:1, H0494:1, H0561:1, L0790:1, H0539:1, L0602:1, S0332:1, L0740:1, L0749:1, L0779:1, L0731:1 and S0424:1. AR313:16, AR039:12, AR300:10, AR299:9, AR096:9, AR218:8, AR277:8, AR089:6, AR185:5, AR316:5, AR219:5, AR104:4, AR282:3, AR240:3, AR055:3, AR060:2 H0538:1 H0431:1, L0352:1, H0478:1 and H0445:1.
164	HKGBF25	738797	174	261 - 371	577	AR283:49, AR218:46, AR039:42, AR219:42, AR055:36, AR316:19, AR313:19, AR240:16, AR096:16, AR299:14, AR060:13, AR089:13, AR185:12, AR300:12, AR282:11, AR104:10, AR277:8 S0474:13, L0748:7, H0734:6, L0740:6, L0754:6, L0439:5, L0747:5, S0003:4, L0770:4, L0662:4, L0805:4, S0134:3, H0638:3, H0735:3, S0222:3, L0764:3, L0783:3, L0731:3, L0758:3, S0358:2, H0050:2, L0471:2, S0364:2, H0591:2, H0264:2, L0763:2, L0794:2, L0766:2, L0657:2, L0517:2, L5622:2, H0723:2, H0521:2, L0756:2, L0757:2, L0485:2, L0604:2, L0595:2, H0739:1, T0002:1, H0222:1, S0040:1, S0114:1, H0583:1, S0282:1, S0418:1, S0420:1, L0534:1, L0539:1, S0356:1, S0444:1, S0360:1, H0730:1, H0733:1, S0007:1, S0045:1, S0046:1, S0132:1, L0717:1, H0431:1, H0461:1, H0586:1, H0559:1, L0622:1, L0623:1, H0013:1, H0250:1, H0575:1, H0706:1, H0036:1, T0071:1, H0581:1, H0421:1, H0596:1, L0040:1, H0057:1, S0051:1, H0083:1, H0060:1, H0039:1, H0628:1, H0674:1, H0708:1, H0068:1, H0038:1, H0634:1, H0056:1, H0561:1, H0641:1, S0472:1, S0144:1, S0422:1, H0743:1, H0529:1, L0769:1, L0639:1, L0380:1, L0803:1, L0378:1, L0633:1, L0807:1, L0659:1, L0367:1, L0791:1, L0666:1, L0664:1, L0665:1, S0428:1, H0593:1, H0689:1, H0711:1, H0682:1, H0658:1, H0539:1, S0378:1, S0406:1, H0631:1, L0743:1, L0744:1, L0779:1, L0759:1, S0031:1, H0444:1, S0436:1, L0596:1, L0590:1, L0608:1, L0593:1, L0361:1, L0601:1, S0106:1, H0668:1, S0026:1, H0665:1, S0242:1, H0543:1, H0422:1 and H0506:1.
165	HKMLK03	734213	175	214 - 249	578	AR313:205, AR096:153, AR240:136, AR282:133, AR219:128, AR218:116, AR299:111, AR316:101, AR277:94, AR089:89, AR039:84, AR300:83, AR283:82, AR185:77, AR060:59, AR104:50, AR055:37
166	HKMLM95	840367	176	390 - 404	579	
167	HLDBG17	855953	177	184 - 309	580	

168	HLDCA54	842190	178	550 - 690	581	L0581:185, H0509:97, H0510:36, H0014:25, H0355:18, H0393:14, L0748:13, H0574:12, H0331:9, H0057:5, H0144:5, H0015:3, L0605:3, H0357:2, H0427:2, L0663:2, L0749:2, L0756:2, H0662:1, H0351:1, H0349:1, H0047:1, H0038:1, L0521:1, L0518:1, L0809:1, L0787:1, L0438:1, L0439:1, L0747:1, L0759:1 and S0412:1.
169	HLDQU79	740755	179	99 - 1142	582	AR060:67, AR055:55, AR185:53, AR299:49, AR277:48, AR283:46, AR104:45, AR089:40, AR282:38, AR300:37, AR039:33, AR316:32, AR096:25, AR240:22, AR313:21, AR219:17, AR218:16 L0157:11, L0005:3, H0619:2, L0771:2, L0766:2, L0803:2, S0152:2, L0740:2, L0754:2, H0716:1, S0222:1, S0010:1, H0373:1, H0428:1, H0059:1, H0509:1, L0794:1, L0804:1, L0805:1, L0809:1, L5622:1, L0666:1, L0665:1, S0044:1, L0749:1, L0756:1, L0759:1, S0196:1 and H0543:1. AR253:8, AR171:7, AR245:6, AR243:5, AR183:5, AR263:5, AR264:4, AR250:4, AR269:4, AR060:4, AR180:4, AR270:4, AR309:4, AR162:4, AR268:4, AR161:4, AR165:4, AR192:4, AR176:4, AR164:4, AR055:4, AR163:4, AR213:4, AR195:4, AR271:4, AR166:3, AR275:3, AR240:3, AR282:3, AR312:3, AR246:3, AR178:3, AR181:3, AR311:3, AR168:3, AR289:3, AR182:3, AR193:3, AR217:3, AR179:3, AR212:3, AR237:3, AR238:3, AR299:3, AR199:3, AR252:3, AR229:3, AR242:2, AR185:2, AR300:2, AR277:2, AR175:2, AR293:2, AR257:2, AR308:2, AR177:2, AR198:2, AR061:2, AR214:2, AR174:2, AR104:2, AR231:2, AR316:2, AR201:2, AR233:2, AR230:2, AR224:2, AR236:2, AR239:2, AR228:2, AR188:2, AR223:2, AR189:2, AR247:2, AR294:2, AR226:2, AR266:2, AR221:2, AR285:2, AR191:2, AR089:2, AR216:2, AR200:2, AR207:2, AR272:2, AR232:2, AR190:2, AR290:2, AR283:2, AR096:2, AR222:2, AR296:2, AR039:2, AR267:2, AR205:2, AR211:1, AR196:1, AR173:1, AR033:1, AR218:1, AR295:1, AR255:1, AR262:1, AR215:1, AR227:1, AR254:1, AR234:1, AR313:1, AR203:1, AR256:1, AR169:1, AR225:1, AR210:1, AR170:1 L0748:9, L0731:7, L0771:6, L0759:6, H0013:5, L0764:4, L0747:4, L0758:4, H0265:3, H0039:3, H0038:3, L0769:3, L0766:3, L0775:3, H0144:3, L0755:3, S0444:2, S0476:2, H0318:2, H0050:2, L0471:2, H0266:2, L0374:2, L0649:2, L0805:2, L0663:2, L0664:2, H0547:2, S0126:2, H0670:2, L0740:2, L0754:2, L0750:2, L0593:2, H0667:2, H0170:1, H0171:1, H0685:1, H0662:1, S0354:1, S0360:1, H0580:1, H0728:1, H0151:1, H0747:1, L3388:1, H0357:1, H0586:1, H0331:1, H0574:1, H0635:1, H0575:1, H0263:1, H0596:1, H0545:1, H0012:1, H0620:1, H0350:1, H0355:1, H0510:1, H0428:1, H0604:1, H0031:1, H0553:1, S0366:1, H0040:1, H0063:1, H0059:1, H0560:1, H0561:1, S0440:1, S0422:1, H0529:1, L0640:1, L0637:1, L0761:1, L0772:1, L0646:1, L4556:1, L0774:1, L0375:1, L0653:1, L0382:1, L5622:1, L0793:1, L4501:1, H0723:1, L0352:1, S0152:1, S0350:1, H0521:1, H0696:1, S0044:1, H0627:1, S0027:1, L0749:1, L0752:1, H0595:1, S0436:1, L0591:1, L0595:1, L0361:1, S0011:1, S0194:1, S0276:1 and H0423:1.
170	HLDRT09	830544	180	522 - 719	583	AR283:10, AR277:8, AR104:8, AR282:7, AR185:7, AR039:7, AR313:6, AR089:6, AR316:6, AR060:5, AR299:5, AR300:5, AR096:5, AR055:5, AR240:4, AR219:4, AR218:3 L0493:15, L0511:11, L0500:7, L0508:6, L0514:6, L0510:6, L0504:4, L0794:4, L0499:4, L0758:4, L0507:3, L0497:3, L0439:3, H0509:2, L0505:2, L0502:2, L0503:2, L0501:2, L0509:2, L0779:2,

							H0265:1, H0717:1, H0656:1, S0116:1, H0483:1, S0360:1, H0431:1, H0370:1, L0015:1, L0021:1, H0744:1, H0510:1, H0181:1, H0617:1, H0708:1, H0040:1, H0633:1, L0769:1, L0639:1, L3905:1, L0667:1, L0521:1, L0662:1, L0768:1, L0649:1, L0803:1, L0804:1, L0775:1, L0515:1, L0809:1, L5622:1, L0789:1, L0791:1, L0666:1, H0144:1, H0682:1, H0659:1, H0660:1, H0672:1, H0696:1, L0748:1, L0750:1, S0192:1 and L0697:1
171	HLHAP05	638476	181	45 - 89	584		L0005:3, H0024:2, H0209:1 and H0445:1
172	HLHCS23	560663	182	25 - 129	585		AR055:5, AR060:4, AR185:3, AR218:3, AR240:3, AR300:3, AR282:3, AR299:2, AR039:2, AR283:2, AR089:2, AR219:2, AR316:2, AR104:2, AR096:1, AR277:1 H0024:1
173	HLJBO72	883431	183	167 - 550	586		AR313:63, AR241:58, AR039:49, AR192:37, AR218:35, AR183:34, AR229:32, AR096:31, AR280:31, AR299:31, AR258:30, AR219:28, AR226:28, AR300:27, AR177:27, AR293:27, AR198:27, AR240:26, AR312:26, AR238:26, AR185:25, AR275:24, AR089:24, AR175:24, AR247:23, AR249:23, AR292:23, AR259:22, AR314:21, AR316:21, AR233:20, AR243:20, AR053:20, AR179:19, AR052:18, AR231:18, AR315:18, AR237:18, AR294:18, AR104:17, AR256:17, AR265:17, AR248:17, AR281:17, AR234:17, AR213:16, AR309:15, AR271:15, AR277:15, AR251:15, AR282:14, AR033:14, AR295:13, AR204:13, AR186:13, AR244:13, AR263:13, AR227:13, AR253:12, AR310:12, AR194:11, AR267:11, AR273:11, AR274:11, AR060:11, AR269:10, AR270:10, AR268:9, AR232:8, AR184:7, AR246:7, AR206:7, AR205:7, AR182:7, AR266:6, AR290:6, AR055:5, AR202:5, AR296:4, AR291:4, AR283:4, AR289:3, AR061:3, AR285:3, AR284:3, AR298:3, AR286:3 L0764:2, L0662:2, L0748:2, L0731:2, L0758:2, S0212:1, S0442:1, S0376:1, S0444:1, S0360:1, T0039:1, H0545:1, H0355:1, S0214:1, H0553:1, L0055:1, H0090:1, H0551:1, H0412:1, H0413:1, H0494:1, S0438:1, H0509:1, H0652:1, S0142:1, L0772:1, L0767:1, L0794:1, L0803:1, L0659:1, L0383:1, L0545:1, L0664:1, H0682:1, H0670:1, S0380:1, H0521:1, H0522:1, H0436:1, S014:1, S0027:1, L0754:1, L0752:1, S0434:1, L0593:1, H0653:1, H0665:1 and S0196:1
174	HLICE88	840321	184	708 - 716	587		AR185:21, AR240:19, AR104:13, AR039:13, AR060:13, AR089:13, AR300:12, AR282:11, AR096:11, AR055:10, AR316:10, AR219:10, AR218:9, AR299:7, AR283:7, AR313:7, AR277:4 H0014:72, L3388:60, H0509:49, L0581:44, H0355:43, H0574:32, H0393:30, H0632:21, H0510:18, S0438:18, H0098:15, H0144:14, H0331:13, H0015:8, L0748:8, H0722:7, L3387:7, H0741:5, H0013:5, H0147:4, T0078:4, L0615:3, H0357:3, S0440:3, H0730:2, H0349:2, H0057:2, H0644:2, H0647:2, L0605:2, L0599:2, H0170:1, L0448:1, H0149:1, L0393:1, S0444:1, L3645:1, H0749:1, L2255:1, H0351:1, H0642:1, H0427:1, H0003:1, H0575:1, H0199:1, H0040:1, H0745:1, L0787:1, L0747:1 and S0436:1
175	HLICO10	658740	185	441 - 659	588		AR096:23, AR313:20, AR299:19, AR219:19, AR089:17, AR240:17, AR218:16, AR316:15, AR060:13, AR282:12, AR039:11, AR185:11, AR104:10, AR283:9, AR277:9, AR300:7, AR055:7 L0766:9, L0758:8, L0747:7, L0749:7, L0771:6, L0776:6, L0439:6, L0748:5, L0596:5, L0770:4, L0740:4, H0622:3, L0483:3, L0662:3, L0666:3, S0418:2, S0376:2, S0360:2, S0408:2, H0747:2, H0251:2, L0646:2, L0764:2, L0774:2, L0806:2, L0517:2, L0663:2, L0664:2, L0744:2,

176	HLJBS28	658742	186	359 - 412	589	L0750:2, L0756:2, L0752:2, L0731:2, L0757:2, L0759:2, H0265:1, L3643:1, L0002:1, L0785:1, S0001:1, H0661:1, H0662:1, S0420:1, S0354:1, S0222:1, H0333:1, H0635:1, H0156:1, H0002:1, H0042:1, H0575:1, L0105:1, H0374:1, H0052:1, H0085:1, L0471:1, T0010:1, H0355:1, H0060:1, T0006:1, H0111:1, H0561:1, S0440:1, S0142:1, L0763:1, L0769:1, L4747:1, L0796:1, L5565:1, L0761:1, L0372:1, L0377:1, L0381:1, L0375:1, L0655:1, L0657:1, L0793:1, L0532:1, L0665:1, L0438:1, H0519:1, H0690:1, S0330:1, S0380:1, S0152:1, S0406:1, H0555:1, L0754:1, L0745:1, L0755:1, H0444:1, S0434:1, S0436:1, L0599:1, L0362:1, L0601:1, H0543:1 and L0600:1.
177	HLMBW89	701996	187	47 - 112	590	AR313:15, AR316:9, AR096:9, AR218:7, AR299:7, AR039:7, AR300:7, AR089:5, AR219:5, AR282:5, AR055:5, AR104:4, AR185:4, AR277:4, AR060:3, AR283:2 L0766:8, L0803:3, H0659:3, L0758:3, L0598:2, L0649:2, L0805:2, L0655:2, L0731:2, L0759:2, S0342:1, H0657:1, L3388:1, L0021:1, H0375:1, H0615:1, H0428:1, L0638:1, L0637:1, L0651:1, L0659:1, L0791:1, H0648:1, S0328:1, H0752:1, L0744:1, L0747:1, L0756:1, L0752:1, H0423:1 and H0422:1.
178	HLMGP50	647603	188	214 - 246	591	H0556:10, L0803:4, L0764:3, L0439:3, S0358:2, H0619:2, H0331:2, H0620:2, L0646:2, L0804:2, L0809:2, L0666:2, L0747:2, L0757:2, L0758:2, L0588:2, L0718:2, H0265:1, H0341:1, S0212:1, H0255:1, H0661:1, H0663:1, S0420:1, S0444:1, H0637:1, H0580:1, H0733:1, H0351:1, H0600:1, H0333:1, H0632:1, H0618:1, H0253:1, H0052:1, H0012:1, H0266:1, H0615:1, H0424:1, H0040:1, H0264:1, S0438:1, S0440:1, L0763:1, L0770:1, L3905:1, L0773:1, L0766:1, L0653:1, L0659:1, L0665:1, L2259:1, L2261:1, L0438:1, H0684:1, H0658:1, S0330:1, S0406:1, L0748:1, L0749:1, L0777:1, L0608:1, H0542:1, H0543:1 and H0423:1.
179	HLMJB64	658699	189	12 - 161	592	AR055:5, AR313:4, AR282:4, AR104:4, AR277:4, AR300:4, AR299:3, AR060:3, AR039:3, AR096:3, AR316:3, AR283:2, AR185:2, AR218:2, AR240:2, AR089:2 H0255:2, H0385:1, L0753:1 and H0595:1. H0521:11, L0751:9, L0777:9, H0255:8, L0747:8, S0360:7, L0766:7, H0542:7, L0754:6, L0749:6, L0757:6, H0265:5, H0052:5, L0659:5, L0665:5, S0126:5, H0539:5, L0748:5, L0439:5, L0740:5, L0758:5, L0759:5, H0624:4, H0717:4, H0046:4, H0024:4, H0551:4, L0776:4, L0438:4, L0602:4, L0743:4, L0779:4, H0575:3, H0253:3, H0545:3, H0266:3, H0284:3, H0039:3, H0068:3, H0509:3, L0770:3, L0769:3, L0662:3, L0774:3, L0809:3, L0666:3, L0663:3, H0435:3, H0672:3, H0522:3, S0406:3, S0028:3, L0752:3, L0731:3, H0543:3, H0171:2, H0556:2, H0716:2, S0212:2, H0638:2, S0376:2, H0586:2, H0333:2, L0021:2, H0599:2, H0036:2, H0618:2, H0581:2, H0050:2, L0163:2, H0644:2, H0040:2, H0087:2, S0038:2, H0494:2, S0144:2, S0002:2, L0369:2, L0763:2, L0637:2, L0800:2, L0773:2, L0803:2, L0375:2, L0806:2, L0655:2, L0657:2, H0144:2, L0565:2, H0689:2, H0660:2, H0436:2, L0750:2, S0436:2, L0596:2, L0589:2, L0485:2, L0604:2, S0192:2, S0242:2, L0718:2, S0040:1, H0713:1, S0134:1, S0430:1, H0341:1, H0483:1, H0671:1, S0418:1, S0420:1, L0005:1, S0442:1, S0354:1, S0358:1, H0637:1, S0045:1, S0046:1, S0140:1, S0132:1, S0476:1, H0645:1, H0351:1, H0549:1, H0550:1, S0222:1, H0441:1, H0370:1, L0468:1, H0592:1, H0587:1, H0497:1, H0559:1, L0622:1, T0114:1, H0013:1, H0069:1, H0635:1, H0427:1, H0097:1, H0042:1,

180	HLQAS12	886180	190	305 - 343	593	<p>T0082:1, H0318:1, H0546:1, H0123:1, L0471:1, H0620:1, H0014:1, H0051:1, H0201:1, S0051:1, H0510:1, H0286:1, H0428:1, T0006:1, H0424:1, H0628:1, H0606:1, H0673:1, H0124:1, H0038:1, H0634:1, H0063:1, H0379:1, H0272:1, H0488:1, H0412:1, H0413:1, S0382:1, S0438:1, S0142:1, S0344:1, S0210:1, S0426:1, L0506:1, L0639:1, L0761:1, L0772:1, L0646:1, L0644:1, L0644:1, L0771:1, L0648:1, L0521:1, L0794:1, L0649:1, L0775:1, L0651:1, L0378:1, L0805:1, L0807:1, L0518:1, L0783:1, L0791:1, L0664:1, S0052:1, S0216:1, H0702:1, H0701:1, S0374:1, H0520:1, H0682:1, H0683:1, H0658:1, H0670:1, H0666:1, S0328:1, S0380:1, S0404:1, H0555:1, H0576:1, H0627:1, L0612:1, S0312:1, S0037:1, L0780:1, S0031:1, H0444:1, H0445:1, S0434:1, L0588:1, L0593:1, S0011:1, S0026:1, H0667:1, S0194:1, S0196:1, H0423:1, H0422:1, S0042:1 and H0506:1.</p> <p>AR240:8, AR218:5, AR316:4, AR060:4, AR104:4, AR055:3, AR300:3, AR282:2, AR185:2, AR039:2, AR283:2, AR299:2, AR089:1, AR277:1, AR313:1, AR096:1</p> <p>H0521:109, H0271:18, L0659:17, L0757:16, H0494:15, H0522:14, S0027:14, L0740:12, L0754:12, L0747:12, H0556:11, H0638:9, S0045:8, H0250:8, H0599:8, S0126:8, H0265:7, S0360:7, S0140:7, T0040:7, H0581:7, S0002:7, L0666:7, S0028:7, S0358:6, H0635:6, H0545:6, H0056:6, L0663:6, H0539:6, L0731:6, S0132:5, H0190:5, H0052:5, H0266:5, L0770:5, S0145:5, L0590:5, H0294:4, S0354:4, S0278:4, H0433:4, H0413:4, H0100:4, L0764:4, L0662:4, L0776:4, L0758:4, H0222:3, H0295:3, S0212:3, H0427:3, H0575:3, H0590:3, S0049:3, H0544:3, H0051:3, S0250:3, H0622:3, H0163:3, H0634:3, H0412:3, H0641:3, S0142:3, S0344:3, S0426:3, L0769:3, L0771:3, L0794:3, L0804:3, L0655:3, H0672:3, L0602:3, H0555:3, H0436:3, S0390:3, L0751:3, L0756:3, S0192:3, H0506:3, L0600:3, H0341:2, S0418:2, S0420:2, S0376:2, S0468:2, H0208:2, S0046:2, H0392:2, T0039:2, T0060:2, H0191:2, H0156:2, H0546:2, H0247:2, H0416:2, H0615:2, H0039:2, L0483:2, H0628:2, H0032:2, H0211:2, H0124:2, H0087:2, H0623:2, S0144:2, L0598:2, L0763:2, L0646:2, L0773:2, L0774:2, L0775:2, L0806:2, S0428:2, S0328:2, S0037:2, S0032:2, L0741:2, L0743:2, L0752:2, L0591:2, L0608:2, L0601:2, L0603:2, S0194:2, H0542:2, H0170:1, H0171:1, L3644:1, H0650:1, S0116:1, H0255:1, H0661:1, H0580:1, H0411:1, S0220:1, H0331:1, H0486:1, L3655:1, H0069:1, H0075:1, L0021:1, H0002:1, H0036:1, H0253:1, T0048:1, H0505:1, H0318:1, H0023:1, H0083:1, S0628:1, L0669:1, S0314:1, H0417:1, H0316:1, H0598:1, H0135:1, H0063:1, H0551:1, H0379:1, H0268:1, H0059:1, T0004:1, H0561:1, S0450:1, H0509:1, H0649:1, H0538:1, S0210:1, L0761:1, L0667:1, L0372:1, L0648:1, L0363:1, L0768:1, L0381:1, L0388:1, L0522:1, L0784:1, L0632:1, L0378:1, L0656:1, L0783:1, L0382:1, L0532:1, L0664:1, L0665:1, S0052:1, L0565:1, H0547:1, H0519:1, H0689:1, H0682:1, H0670:1, H0518:1, S0044:1, H0576:1, L0439:1, L0746:1, L0755:1, H0595:1, S0436:1, L0581:1, H0667:1 and H0352:1.</p>
181	HLQCL64	864966	191	3 - 548	594	<p>AR316:11, AR240:9, AR055:8, AR060:8, AR096:6, AR104:5, AR218:5, AR185:5, AR299:5, AR089:4, AR283:4, AR300:4, AR313:4, AR219:3, AR039:3, AR277:2, AR282:2</p> <p>H0574:7, L3388:4, S0438:3, S0428:3, H0632:2, H0069:2, H0510:2, H0634:2, S0142:2, S0052:2, S0216:2, H0489:1, H0742:1, S0278:1, H0098:1, H0271:1, H0416:1, S0002:1, S0426:1, L0770:1, L0646:1, L0800:1, L0644:1, L0764:1, L0803:1, L0651:1, L0525:1, L0787:1 and H0518:1.</p>

182	HLWAV47	897769	192	200 - 298	595	AR277:35, AR283:29, AR282:27, AR316:23, AR313:20, AR219:19, AR089:18, AR104:17, AR240:17, AR299:16, AR055:16, AR218:16, AR300:16, AR185:15, AR096:15, AR039:11, AR060:10, L0754:7, L0803:4, H0553:3, H0478:2, L0745:2, L0753:2, H0170:1, H0057:1, L0163:1, S6028:1, L0598:1, L0666:1, L0663:1 and H0144:1.
183	HLWBB73	740757	193	122 - 274	596	AR296:99, AR284:86, AR295:63, AR291:55, AR298:55, AR285:50, AR292:38, AR293:36, AR266:30, AR286:29, AR294:21, AR289:20, AR256:18, AR259:17, AR258:16, AR104:11, AR270:10, AR184:9, AR055:9, AR269:8, AR219:8, AR183:8, AR039:7, AR182:7, AR316:7, AR283:7, AR290:7, AR268:6, AR096:6, AR267:6, AR299:6, AR238:6, AR231:5, AR175:5, AR060:5, AR089:5, AR185:5, AR313:4, AR033:4, AR179:4, AR282:4, AR237:3, AR177:3, AR280:3, AR247:3, AR277:3, AR300:3, AR232:3, AR226:3, AR234:2, AR052:2, AR248:2, AR310:2, AR233:2, AR229:2, AR240:2, AR227:2, AR204:2, AR315:1, AR263:1, AR241:1 L0749:16, L0439:14, L0748:12, L0759:7, L0483:6, L0803:6, H0734:5, L0758:5, H0052:4, H0729:3, H0733:3, L0740:3, L0731:3, H0556:2, S0132:2, H0455:2, H0546:2, S0003:2, S0366:2, H0561:2, L0766:2, L0804:2, L0774:2, L0606:2, L0438:2, H0539:2, L0751:2, L0779:2, H0170:1, H0394:1, S6024:1, H0661:1, L3659:1, H0638:1, L0005:1, S0356:1, S0442:1, S0358:1, S0360:1, H0730:1, H0741:1, H0728:1, H0735:1, S0045:1, S6026:1, H0411:1, H0331:1, H0486:1, H0253:1, H0581:1, S0049:1, S0388:1, S0051:1, T0010:1, H0687:1, H0328:1, H0553:1, L0055:1, H0032:1, H0400:1, S0036:1, H0591:1, H0551:1, H0264:1, H0413:1, S0438:1, L0369:1, L0637:1, L0646:1, L0521:1, L0806:1, L0655:1, L0809:1, L5623:1, L0663:1, L0665:1, H0691:1, L0352:1, L3811:1, H0682:1, H0659:1, H0648:1, S0380:1, H0521:1, H0696:1, H0134:1, S0404:1, L0756:1, L0777:1, L0752:1, S0031:1, S0260:1, L0480:1, L0485:1, L0608:1, L0595:1, S0242:1, H0543:1 and S0424:1.
184	HLWCN37	827294	194	81 - 212	597	AR240:79, AR104:58, AR316:13, AR055:12, AR185:9, AR096:8, AR282:7, AR299:7, AR313:6, AR039:6, AR089:6, AR300:6, AR219:5, AR218:5, AR283:5, AR060:4, AR277:3 L0766:11, L0439:7, L0758:7, H0556:5, H0644:5, H0650:4, H0616:4, L3815:4, L0771:4, L0805:4, S0328:4, L0756:4, L0731:4, S0222:3, H0169:3, S0422:3, L0770:3, L0508:3, L0776:3, L0438:3, S0330:3, L0748:3, L0747:3, L0599:3, H0494:2, L0768:2, L0794:2, L0783:2, L0666:2, L0754:2, S0031:2, H0423:2, H0171:1, S6024:1, S0114:1, S0110:1, S0001:1, S0400:1, H0661:1, S0360:1, S0410:1, H0728:1, H0549:1, H0610:1, H0592:1, H0586:1, H0587:1, L3653:1, H0599:1, H0706:1, H0123:1, H0373:1, H0375:1, S6028:1, H0031:1, L0143:1, H0264:1, S0372:1, S0448:1, H0647:1, L0506:1, L0769:1, L0638:1, L0764:1, L0773:1, L0767:1, L0499:1, L0497:1, L0659:1, L0809:1, L5623:1, L0665:1, H0701:1, H0703:1, S0454:1, H0696:1, S0146:1, H0555:1, L0742:1, L0740:1, L0750:1, L0786:1 and L0777:1.
185	HLYEUS9	582084	195	258 - 389	598	H0445:3 and H0749:1.
186	HLYGB19	838083	196	1863 - 1907	599	AR240:33, AR096:27, AR313:22, AR055:15, AR282:15, AR316:13, AR060:10, AR089:9, AR039:9, AR300:7, AR277:7, AR299:7, AR104:5, AR219:4, AR185:4, AR283:4, AR218:1 L0752:10, L0471:9, L0731:8, H0422:8, H0040:5, L0641:5, L0662:4, L0439:4, L0755:4, S0114:3, S0360:3, L0766:3, L0747:3, L0749:3, L0757:3, H0445:3, H0543:3, H0265:2, H0556:2, S0116:2,



							H0013:2, H0244:2, H0135:2, H0264:2, L0769:2, L0639:2, L0761:2, L0774:2, L0775:2, L0776:2, L0384:2, L0663:2, L0665:2, L0565:2, H0658:2, H0539:2, L3832:2, L0744:2, L0748:2, L0750:2, L0779:2, L0758:2, L0759:2, S0134:1, H0657:1, S0212:1, S0400:1, S0420:1, L3645:1, S0046:1, S0476:1, L0717:1, S0220:1, L2491:1, H0599:1, H0706:1, L0563:1, H0545:1, H0150:1, H0009:1, H0024:1, T0010:1, H0354:1, H0028:1, H0553:1, L0456:1, H0616:1, H0413:1, L0351:1, S0438:1, H0646:1, L3818:1, S0208:1, L0796:1, L3904:1, L0667:1, L0644:1, L0764:1, L0768:1, L0649:1, L0655:1, L0606:1, L0634:1, L0659:1, L0809:1, L0367:1, L0793:1, L0666:1, H0144:1, L0438:1, L2670:1, H0689:1, H0666:1, H0672:1, S0378:1, H0436:1, L0756:1, L0599:1, L0595:1, S0242:1, H0542:1, H0423:1 and L3796:1.
187	HLYGE16	651339	197	406 - 627	600		AR055:2, AR185:2, AR316:1, AR060:1, AR283:1 H0255:5, H0144:3, H0429:2, L0662:2, L0794:2, L0803:2, L0809:2, L0758:2, L0599:2, H0542:2, S0040:1, H0650:1, S0442:1, H0642:1, L0157:1, H0571:1, H0673:1, H0494:1, L0771:1, L0766:1, L0776:1, L0629:1, L0657:1, L0659:1, L0792:1, L0565:1, H0345:1, L0748:1, L0754:1, L0747:1, L0749:1, H0445:1 and S0242:1.
188	HLYGY91	658703	198	211 - 339	601		AR313:6, AR316:5, AR218:3, AR300:3, AR299:3, AR055:3, AR185:2, AR039:2, AR096:2, AR277:2, AR219:1, AR089:1 H0692:10, L0777:10, L0805:5, L0803:3, L2497:2, H0328:2, L0662:2, L0794:2, L0809:2, L3832:2, L0748:2, L0752:2, L0599:2, H0170:1, H0402:1, S0444:1, S0360:1, H0747:1, L2486:1, L3503:1, H0427:1, H0644:1, H0038:1, L0800:1, L0648:1, L0804:1, H0670:1, H0478:1, L0731:1, L0758:1, H0445:1, S0434:1, L0591:1 and L0362:1.
189	HMCFFH60	654853	199	211 - 357	602		AR104:113, AR219:90, AR218:87, AR089:82, AR283:79, AR277:79, AR313:78, AR055:75, AR240:71, AR316:70, AR185:63, AR282:60, AR299:59, AR096:54, AR039:50, AR060:48, AR300:38, L0659:10, T0040:9, L0665:9, L0759:9, L0519:8, L0776:7, S0436:7, L0744:6, L0747:6, L0749:6, L0758:6, S0418:5, H0052:5, H0457:5, H0150:5, L0769:5, L0766:5, L0748:5, H0265:4, S0420:4, S0356:4, S0360:4, S0046:4, S0010:4, H0545:4, H0687:4, H0494:4, S0440:4, L0662:4, L0768:4, L0774:4, L0775:4, L0751:4, L0754:4, L0779:4, H0484:3, H0734:3, H0549:3, H0599:3, H0421:3, H0620:3, S0051:3, L0764:3, L0666:3, H0435:3, H0648:3, H0539:3, L0596:3, H0543:3, H0624:2, H0171:2, H0556:2, H0295:2, H0657:2, H0656:2, S0354:2, S0358:2, S0376:2, S0408:2, S0007:2, S0132:2, S0476:2, S0222:2, H0486:2, T0039:2, H0635:2, H0156:2, H0618:2, T0048:2, H0581:2, H0544:2, H0373:2, H0428:2, T0006:2, H0604:2, H0031:2, H0551:2, T0067:2, H0264:2, H0647:2, S0344:2, L0638:2, L0372:2, L0641:2, L0806:2, L0653:2, L0527:2, L0809:2, L0565:2, L0438:2, H0519:2, H0689:2, H0658:2, H0672:2, S0330:2, S0406:2, H0436:2, S0027:2, L0750:2, S0434:2, L0605:2, S0194:2, H0506:2, H0685:1, H0713:1, H0717:1, H0740:1, S0294:1, S0212:1, S0110:1, S0282:1, H0483:1, S0442:1, H0637:1, H0733:1, S0468:1, H0747:1, L3388:1, H0351:1, H0550:1, H0587:1, H0642:1, H0559:1, L0622:1, L3653:1, H0013:1, H0250:1, H0069:1, S0280:1, H0706:1, S0346:1, H0705:1, H0318:1, S0049:1, H0748:1, L0040:1, H0597:1, L0738:1, H0009:1, H0563:1, H0123:1, H0050:1, L0471:1, H0012:1, H0024:1, H0014:1, S0388:1, H0239:1, H0594:1, S028:1,

						H0271:1, H0292:1, H0213:1, H0628:1, H0673:1, H0068:1, S0036:1, H0135:1, H0090:1, H0038:1, H0634:1, H0087:1, H0488:1, H0268:1, H0412:1, H0413:1, S0038:1, T0042:1, H0560:1, H0641:1, S0210:1, S0422:1, S0002:1, H0529:1, L0770:1, L0637:1, L3905:1, L5566:1, L0761:1, L0772:1, L0646:1, L0374:1, L0771:1, L4500:1, L0651:1, L0784:1, L0807:1, L0657:1, L0658:1, L0656:1, L0782:1, L0783:1, L0530:1, L0647:1, L0788:1, L0663:1, L0664:1, S0216:1, H0693:1, L3826:1, H0520:1, H0547:1, S0126:1, H0682:1, H0659:1, S0328:1, S0380:1, H0710:1, H0521:1, H0522:1, H0627:1, S0028:1, L0741:1, L0742:1, L0439:1, L0740:1, L0756:1, L0786:1, L0780:1, L0755:1, L0581:1, L0595:1, L0601:1, H0667:1, S0192:1, H0542:1, L0718:1 and S0424:1.
190	HMDAB29	584789	200	97 - 177	603	AR313:127, AR039:86, AR299:64, AR089:56, AR185:51, AR096:50, AR277:50, AR300:42, AR316:37, AR240:33, AR218:27, AR219:25, AR104:22, AR060:22, AR282:20, AR055:16, AR283:9 H0346:1, H0598:1 and S0330:1.
191	HMDAD44	566854	201	135 - 161	604	AR277:44, AR283:35, AR219:28, AR316:26, AR089:24, AR218:23, AR313:22, AR282:22, AR055:22, AR104:21, AR299:20, AR185:19, AR240:19, AR096:17, AR039:16, AR060:14, AR300:14 L0749:3, H0346:1, H0370:1, H0427:1 and L0439:1.
192	HMEBB82	783077	202	30 - 134	605	AR251:32, AR309:25, AR310:25, AR273:24, AR312:23, AR052:22, AR053:22, AR265:22, AR274:21, AR313:18, AR292:17, AR263:17, AR295:17, AR218:16, AR219:15, AR213:15, AR183:15, AR266:15, AR175:15, AR296:14, AR294:14, AR248:14, AR256:14, AR275:13, AR291:13, AR247:13, AR259:13, AR271:12, AR253:12, AR290:12, AR177:12, AR243:12, AR258:12, AR286:11, AR293:10, AR299:10, AR249:10, AR314:10, AR185:9, AR096:9, AR033:9, AR186:9, AR280:8, AR240:8, AR300:8, AR231:8, AR198:8, AR179:8, AR282:7, AR238:7, AR315:7, AR232:7, AR270:7, AR298:7, AR089:7, AR283:7, AR182:7, AR226:7, AR267:6, AR246:6, AR039:6, AR192:6, AR234:6, AR316:6, AR289:6, AR269:6, AR237:6, AR055:5, AR184:5, AR061:5, AR281:5, AR205:5, AR104:5, AR233:4, AR268:4, AR241:4, AR229:4, AR194:4, AR060:4, AR285:4, AR284:4, AR277:3, AR206:3, AR227:3, AR244:3, AR202:2, AR204:1 H0046:7, L0471:5, L0766:5, H0124:4, L5622:4, L0666:4, L0748:4, L0779:4, S0214:3, S0422:3, L0803:3, H0144:3, H0520:3, H0521:3, L0777:3, L0758:3, S0376:2, S0360:2, S0408:2, L0717:2, L2255:2, H0431:2, H0574:2, H0014:2, S0003:2, H0674:2, S0306:2, L0646:2, L0804:2, L0526:2, L0663:2, L0665:2, L0438:2, L3825:2, S0404:2, S0406:2, S3014:2, L0752:2, L0755:2, L0731:2, L0757:2, S0436:2, H0667:2, S0242:2, S0196:2, H0543:2, H0556:1, H0650:1, S0001:1, L0481:1, S0418:1, L0005:1, S0356:1, S0354:1, H0730:1, H0728:1, H0735:1, H0749:1, H0587:1, L3816:1, H0632:1, H0559:1, H0492:1, T0039:1, L3653:1, L3655:1, H0013:1, H0036:1, S0010:1, S0346:1, H0251:1, H0545:1, H0123:1, T0010:1, H0267:1, H0615:1, H0553:1, H0591:1, H0063:1, H0551:1, H0264:1, H0488:1, H0412:1, H0413:1, H0560:1, S0352:1, S0438:1, S0440:1, H0529:1, L0763:1, L0770:1, L0769:1, L0641:1, L0642:1, L0764:1, L0662:1, L0363:1, L5574:1, L0774:1, L0375:1, L0527:1, L0657:1, L0656:1, L0540:1, L0782:1, L5623:1, L0787:1, L0793:1, L3827:1, H0547:1, H0666:1, S0328:1, S0044:1, H0555:1, H0732:1, L0744:1, L0740:1, L0749:1, L0756:1, S0260:1, L0595:1, H0653:1 and H0422:1.

193	HMEDE24	837027	203	900 - 1001	606	AR219:112, AR218:102, AR268:66, AR299:42, AR210:37, AR173:37, AR269:36, AR270:33, AR039:33, AR290:29, AR275:28, AR300:28, AR096:28, AR188:27, AR183:26, AR175:25, AR053:25, AR191:25, AR189:25, AR198:23, AR267:23, AR211:23, AR196:22, AR192:22, AR162:22, AR174:22, AR163:21, AR161:21, AR180:21, AR313:21, AR274:20, AR165:20, AR231:20, AR271:20, AR243:20, AR181:20, AR247:20, AR182:19, AR164:19, AR089:19, AR166:19, AR178:19, AR199:18, AR200:18, AR282:18, AR238:18, AR213:18, AR242:18, AR240:17, AR177:17, AR205:17, AR195:17, AR316:16, AR309:16, AR246:16, AR203:16, AR190:16, AR212:15, AR176:15, AR197:15, AR308:15, AR312:15, AR234:15, AR272:14, AR311:14, AR201:14, AR245:14, AR193:14, AR207:13, AR179:13, AR264:13, AR296:13, AR185:13, AR226:13, AR239:13, AR263:13, AR291:13, AR254:12, AR233:12, AR257:12, AR258:12, AR255:12, AR262:12, AR060:12, AR285:12, AR256:12, AR229:11, AR232:11, AR261:11, AR230:11, AR293:11, AR266:11, AR237:11, AR236:11, AR104:10, AR289:10, AR253:9, AR297:9, AR288:9, AR287:9, AR277:9, AR252:9, AR260:9, AR250:9, AR061:8, AR204:8, AR294:8, AR295:8, AR283:8, AR228:8, AR227:8, AR033:7, AR286:7, AR171:7, AR235:7, AR215:7, AR225:7, AR170:6, AR223:6, AR217:6, AR221:5, AR055:5, AR216:5, AR169:5, AR214:4, AR172:4, AR168:4, AR222:4, AR224:4 H0266:1
194	HMELM75	587307	204	113 - 394	607	AR313:8, AR055:6, AR316:6, AR218:5, AR060:5, AR104:5, AR277:4, AR282:4, AR240:4, AR300:4, AR299:3, AR219:3, AR089:3, AR096:3, AR185:3, AR283:2, AR039:2 L0766:7, L0764:4, H0266:3, L0749:3, S0420:2, L0646:2, L0768:2, L0747:2, L0758:2, L0608:2, H0667:2, S0424:2, H0650:1, H0661:1, H0645:1, H0486:1, H0253:1, H0606:1, H0040:1, H0264:1, L0564:1, L0369:1, L0763:1, L0769:1, L0372:1, L0771:1, L0606:1, L5623:1, L0666:1, L0665:1, H0684:1, S0328:1, S0152:1, H0521:1, L0748:1, L0755:1, H0595:1, S0436:1, L0593:1, L0595:1, H0668:1, S0026:1, H0665:1 and H0542:1.
195	HMIK10	562774	205	195 - 290	608	AR055:7, AR218:7, AR060:6, AR219:6, AR185:4, AR283:4, AR240:4, AR300:4, AR104:3, AR089:3, AR299:3, AR039:3, AR316:2, AR277:2, AR096:2, AR313:2, AR282:2 S6028:1
196	HMIBD93	634227	206	983 - 1180	609	AR277:111, AR283:78, AR219:72, AR316:65, AR104:61, AR055:58, AR089:55, AR218:54, AR313:49, AR282:48, AR299:47, AR039:44, AR185:41, AR096:39, AR240:36, AR060:33, AR300:31 L0439:6, L0751:5, L0770:3, L0769:3, L0764:3, H0617:2, L0766:2, L0752:2, H0445:2, S6024:1, H0351:1, S0222:1, H0586:1, S0010:1, S6028:1, L0768:1, L0794:1, L0438:1, L0747:1, L0753:1 and L0758:1.
197	HMIBF07	603528	207	229 - 249	610	AR055:5, AR060:4, AR240:4, AR300:3, AR299:3, AR104:3, AR283:3, AR219:2, AR218:2, AR185:2, AR039:2, AR089:2, AR277:2, AR096:2, AR316:2, AR282:1, AR313:1 S6028:1
198	HMICP65	847403	208	249 - 341	611	AR313:25, AR039:24, AR277:13, AR104:13, AR300:11, AR096:11, AR299:10, AR185:10, AR089:9, AR219:9, AR316:8, AR218:8, AR240:6, AR060:6, AR282:5, AR055:3, AR283:2 S0474:12, H0156:5, H0650:3, L0666:3, H0341:2, H0393:2, H0486:2, H0052:2, H0039:2, H0135:2,

							S0330:2, L0748:2, L0439:2, L0757:2, L0601:2, H0224:1, H0225:1, S0134:1, H0583:1, H0657:1, S0212:1, S0282:1, H0735:1, S0046:1, H0550:1, H0431:1, L3653:1, H0013:1, H0042:1, H0590:1, S0010:1, H0318:1, H0046:1, H0009:1, H0050:1, H0242:1, S0388:1, S0628:1, H0271:1, H0031:1, H0644:1, L0455:1, L0370:1, T0042:1, H0560:1, H0538:1, L3904:1, L0804:1, L0805:1, L0653:1, L0776:1, L0659:1, L0787:1, L2264:1, H0547:1, H0648:1, H0539:1, L0745:1, S0436:1 and S0242:1.
199	HMJAK70	610099	209	273 - 305	612		AR251:4, AR052:3, AR263:3, AR269:3, AR265:2, AR253:2, AR309:2, AR238:2, AR271:2, AR186:2, AR247:2, AR270:2, AR266:1, AR277:1, AR312:1, AR053:1, AR295:1, AR241:1, AR237:1, AR310:1, AR213:1, AR182:1, AR175:1, AR313:1, AR268:1, AR226:1, AR096:1 H0391:1
200	HMSBE04	709672	210	295 - 378	613		AR055:6, AR060:5, AR240:4, AR185:4, AR299:4, AR300:3, AR283:3, AR089:2, AR316:2, AR219:2, AR218:2, AR277:2, AR096:2, AR039:2, AR282:2, AR104:1, AR313:1 S0002:1
201	HMSCL38	801919	211	120 - 227	614		AR313:22, AR039:16, AR096:15, AR282:15, AR277:14, AR299:14, AR218:13, AR089:13, AR300:12, AR185:11, AR316:9, AR219:9, AR240:8, AR060:7, AR055:6, AR104:5 H0009:1 and S0002:1.
202	HMSCR69	843059	212	107 - 1249	615		AR218:32, AR219:25, AR283:15, AR316:15, AR096:15, AR240:15, AR313:14, AR089:14, AR282:14, AR104:14, AR299:13, AR039:12, AR300:12, AR055:11, AR277:11, AR060:11, AR185:10 H0457:6, L0766:6, L0777:4, S0354:3, S0474:3, H0038:3, L0747:3, L0588:3, L0581:3, H0653:3, H0265:2, S0444:2, H0734:2, H0013:2, H0591:2, H0616:2, S0002:2, L0770:2, L0775:2, H0670:2, L0748:2, L0740:2, L0749:2, H0667:2, H0543:2, L3643:1, H0713:1, H0717:1, H0656:1, H0341:1, S0212:1, H0402:1, S0376:1, H0733:1, H0747:1, H0645:1, H0619:1, H0411:1, S0222:1, H0370:1, H0392:1, H0643:1, H0632:1, H0156:1, H0599:1, H0098:1, S0010:1, S0665:1, H0581:1, T0110:1, L0040:1, H0545:1, L0471:1, H0355:1, H0179:1, S0316:1, S0003:1, S0214:1, H0615:1, H0031:1, H0035:1, H0068:1, H0135:1, H0634:1, H0063:1, H0551:1, H0494:1, S0438:1, H0509:1, S0144:1, H0529:1, L0520:1, L0769:1, L0761:1, L0764:1, L0530:1, L5623:1, L0666:1, L0663:1, L0664:1, L0665:1, H0144:1, S0126:1, H0435:1, H0658:1, H0648:1, H0521:1, S0188:1, H0436:1, S012:1, S3014:1, L0744:1, L0439:1, L0786:1, L0780:1, L0752:1, L0755:1, H0343:1, S0436:1, L0591:1, L0366:1 and S0242:1.
203	HMSHU20	847410	213	50 - 391	616		AR248:12, AR313:11, AR240:11, AR253:10, AR039:9, AR089:9, AR299:8, AR096:8, AR249:8, AR310:7, AR251:7, AR312:7, AR060:7, AR316:7, AR274:6, AR183:6, AR265:6, AR184:6, AR309:6, AR277:6, AR270:6, AR185:6, AR282:6, AR182:6, AR271:6, AR269:6, AR219:6, AR273:6, AR300:5, AR229:5, AR284:5, AR055:5, AR104:5, AR290:5, AR241:5, AR268:5, AR275:5, AR292:5, AR218:4, AR213:4, AR052:4, AR293:4, AR267:4, AR053:4, AR061:4, AR291:4, AR033:4, AR186:4, AR286:4, AR285:4, AR238:4, AR289:4, AR247:4, AR226:4, AR298:4, AR296:4, AR233:4, AR175:4, AR234:4, AR280:4, AR231:4, AR266:3, AR177:3, AR258:3, AR205:3, AR243:3, AR315:3, AR295:3, AR237:3, AR192:3, AR246:3, AR294:3, AR259:3, AR202:3, AR283:2, AR232:2, AR314:2, AR227:2, AR179:2, AR256:2, AR206:1, AR263:1, AR281:1, AR194:1

204	HMSHY25	886183	214	656 - 763	617	S0278:4, L0740:4, H0250:2, H0581:2, S0344:2, S0002:2, L0774:2, S0116:1, H0457:1, H0031:1, H0063:1, S0142:1, L0800:1, S0216:1, H0521:1, L0744:1, L0777:1 and H0653:1.
205	HMTAB77	847411	215	769 - 915	618	AR095:5, AR060:4, AR282:4, AR104:3, AR283:3, AR300:3, AR185:3, AR277:2, AR039:2, AR316:2, AR096:2, AR089:2, AR299:2, AR218:2, AR219:2, AR240:1 S0002:1 and S0426:1. AR297:10, AR287:9, AR288:9, AR225:9, AR291:7, AR171:5, AR221:5, AR296:5, AR285:5, AR255:5, AR193:4, AR178:4, AR294:4, AR168:4, AR169:4, AR217:4, AR295:4, AR170:4, AR235:4, AR224:4, AR223:4, AR216:4, AR180:4, AR261:4, AR245:4, AR293:3, AR222:3, AR308:3, AR262:3, AR243:3, AR289:3, AR257:3, AR195:3, AR270:3, AR253:3, AR162:3, AR163:3, AR205:3, AR286:3, AR161:3, AR173:3, AR290:3, AR184:3, AR254:3, AR165:3, AR192:3, AR236:3, AR172:3, AR164:3, AR179:2, AR269:2, AR181:2, AR183:2, AR166:2, AR267:2, AR260:2, AR190:2, AR312:2, AR201:2, AR175:2, AR258:2, AR039:2, AR212:2, AR247:2, AR096:2, AR174:2, AR282:2, AR292:2, AR191:2, AR268:2, AR189:2, AR266:2, AR313:2, AR316:1, AR089:1, AR213:1, AR264:1, AR277:1, AR219:1, AR060:1, AR299:1, AR263:1, AR188:1, AR182:1, AR200:1, AR300:1, AR196:1, AR226:1, AR240:1, AR210:1, AR177:1, AR234:1 H0436:65, L0747:25, H0521:12, L0754:11, L0471:7, L0439:7, S0358:6, S0360:5, L0809:5, H0520:5, L0731:5, L0757:5, L0599:5, H0580:4, H0581:4, S0003:4, H0551:4, S0440:4, L0803:4, L0775:4, L0517:4, H0547:4, H0519:4, H0539:4, L0750:4, S0436:4, H0624:3, H0717:3, L3001:3, L2491:3, H0575:3, S0474:3, H0373:3, H0428:3, H0090:3, H0616:3, H0529:3, L2654:3, H0144:3, H0518:3, L0744:3, L0752:3, L0758:3, S0192:3, H0171:2, H0716:2, S0001:2, H0669:2, S0418:2, S0420:2, L0562:2, S0356:2, S0442:2, S0354:2, S0444:2, H0393:2, S0222:2, H0592:2, H0586:2, H0333:2, L3816:2, T0040:2, H0156:2, S0049:2, H0052:2, H0046:2, H0457:2, H0687:2, L0455:2, H0040:2, H0412:2, H0560:2, S0208:2, S0422:2, L0520:2, L0770:2, L0769:2, L3905:2, L0764:2, L0648:2, L0662:2, L0794:2, L0805:2, L0518:2, L0783:2, L0789:2, L2264:2, L2675:2, L3829:2, H0658:2, S0152:2, S0406:2, H0555:2, L0748:2, L0740:2, L0759:2, H0445:2, S0434:2, L0362:2, S0026:2, S0194:2, H0542:2, H0543:2, S0424:2, H0352:2, H0149:1, S0040:1, H0583:1, L0453:1, L3814:1, L2910:1, H0341:1, S0212:1, H0671:1, H0663:1, L2289:1, L3659:1, H0638:1, L0005:1, H0735:1, S0045:1, H0749:1, H0619:1, H0411:1, H0175:1, H0369:1, H0431:1, H0392:1, H0455:1, H0612:1, H0587:1, H0331:1, L0622:1, H0486:1, H0635:1, H0599:1, H0098:1, S0010:1, H0318:1, H0310:1, H0263:1, T0110:1, H0545:1, N0006:1, H0123:1, H0050:1, H0011:1, H0620:1, L0163:1, T0010:1, H0083:1, H0375:1, S6028:1, H0028:1, S0250:1, S0214:1, H0328:1, H0039:1, H0031:1, H0553:1, H0124:1, H0598:1, S0036:1, H0038:1, H0063:1, T0067:1, H0264:1, H0413:1, H0623:1, S0038:1, H0100:1, L0564:1, T0042:1, H0494:1, H0625:1, H0561:1, S0150:1, L0598:1, L0763:1, L0761:1, L0667:1, L0641:1, L0650:1, L0375:1, L0523:1, L0654:1, L0776:1, L0807:1, L0647:1, L0792:1, L0793:1, L0666:1, L0664:1, L0665:1, L2657:1, L2260:1, H0699:1, L2439:1, S0374:1, L0438:1, L3827:1, L3210:1, H0689:1, H0435:1, H0659:1, H0670:1, H0660:1, L0602:1, L3832:1, H0627:1, S0037:1, S0027:1, L3327:1, L0743:1, L0749:1, L0779:1, L2138:1, H0595:1, L0605:1, L0485:1,

206	HMJAE26	747403	216	710 - 802	619	L0604:1, L0593:1, L0594:1, S0196:1, S0412:1, L3556:1 and L3378:1. AR277:29, AR283:26, AR282:19, AR316:17, AR240:16, AR219:15, AR313:14, AR300:14, AR089:14, AR096:13, AR218:13, AR104:13, AR299:13, AR185:11, AR055:11, AR039:10, AR060:9 S0406:5, H0305:3, S0422:3, L0743:3, H0617:2, L0770:2, L0794:2, L0384:2, L0666:2, L0777:2, L0591:2, L0595:2, H0556:1, H0717:1, S0418:1, S0358:1, S0410:1, H0734:1, S0045:1, H0497:1, H0493:1, H0618:1, H0318:1, H0581:1, H0012:1, H0620:1, H0014:1, T0010:1, H0292:1, S0250:1, H0615:1, H0428:1, H0087:1, H0551:1, L0351:1, H0560:1, H0132:1, H0529:1, L5565:1, L3905:1, L0761:1, L0644:1, L0375:1, L0524:1, L0653:1, L0656:1, L0809:1, L0791:1, H0520:1, H0547:1, H0690:1, H0682:1, H0670:1, H0672:1, S0404:1, H0555:1, L0749:1, L0779:1, L0780:1, L0731:1, H0445:1, H0653:1, S0192:1 and H0542:1.
207	HMVDU15	801969	217	274 - 351	620	AR316:19, AR277:18, AR218:16, AR283:16, AR313:16, AR219:16, AR089:14, AR096:13, AR282:13, AR185:12, AR299:12, AR055:11, AR039:11, AR104:11, AR300:11, AR240:10, AR060:9 H0436:20, L0748:6, L0750:6, S0408:3, H0100:3, L0755:3, H0657:2, L0804:2, L0666:2, S0380:2, L0752:2, L0759:2, H0713:1, S0212:1, L3659:1, H0742:1, S0046:1, S0222:1, H0746:1, H0545:1, H0009:1, H0024:1, T0023:1, H0032:1, T0067:1, S0422:1, L0763:1, L0638:1, L0772:1, L0764:1, L0765:1, L0771:1, L0794:1, L0803:1, L0774:1, L0655:1, L0382:1, L381:1, H0689:1, H0435:1, S0330:1, H0696:1, L0740:1, L0747:1, L0731:1, L0758:1, S0436:1 and L0608:1.
208	HMWJF53	758158	218	1015 - 1131	621	H0255:7, H0318:5, H0620:5, L0754:5, L0766:4, L0666:4, S0358:3, H0457:3, L0776:3, L0809:3, H0696:3, S3012:3, H0624:2, H0295:2, H0254:2, H0662:2, H0402:2, H0305:2, S0132:2, L0717:2, L0021:2, H0617:2, H0673:2, L0769:2, L0638:2, L0796:2, L0667:2, L0662:2, L0653:2, L0783:2, L0663:2, S0126:2, H0539:2, H0521:2, S0044:2, S0027:2, L0745:2, L0747:2, L0755:2, L0587:2, H0352:2, H0170:1, H0556:1, H0657:1, H0341:1, S0212:1, S0418:1, S0360:1, S0410:1, H0339:1, H0549:1, S0222:1, H0441:1, H0331:1, H0486:1, H0427:1, H0575:1, T0048:1, H0581:1, H0052:1, H0545:1, H0150:1, H0570:1, H0569:1, L0163:1, H0083:1, H0355:1, H0252:1, H0039:1, T0023:1, H0124:1, H0090:1, H0413:1, H0560:1, H0561:1, S0372:1, H0509:1, H0652:1, S0144:1, S0422:1, L0762:1, L0770:1, L0761:1, L0373:1, L0372:1, L0645:1, L0764:1, L0771:1, L0648:1, L0768:1, L0649:1, L0804:1, L0651:1, L0806:1, L0655:1, L0659:1, L0517:1, L0528:1, L0665:1, H0698:1, S0374:1, L0438:1, H0684:1, H0658:1, H0670:1, S0328:1, S0380:1, H0134:1, S0406:1, L0743:1, L0749:1, L0750:1, L0779:1, L0759:1, S0031:1, H0445:1, H0653:1, S0194:1, S0276:1, H0542:1 and S0460:1.
209	HNEAK81	722235	219	288 - 359	622	H0179:1
210	HNECL22	799541	220	472 - 576	623	AR218:10, AR219:10, AR185:10, AR277:9, AR283:8, AR282:8, AR039:8, AR089:8, AR316:7, AR055:7, AR096:7, AR104:7, AR240:7, AR299:6, AR313:6, AR060:5, AR300:5 L0748:54, L0766:20, L0754:18, H0179:12, L0777:12, L0750:11, L0749:10, S0116:9, H0271:9, L0761:9, H0031:8, L0794:8, H0144:8, L0744:8, H0457:7, S0356:6, H0393:6, H0013:6, L0438:6, L0743:6, L0751:6, L0745:6, L0779:6, L0758:6, H0421:5, L0805:5, H0436:5, H0305:4, H0599:4, H0050:4, L0769:4, L0646:4, L0771:4, L0803:4, L0776:4, L0809:4, S0428:4, L0603:4, H0662:3,

211	HNECW49	639117	221	316 - 489	624	S0358:3, S0045:3, H0747:3, H0549:3, H0497:3, S0474:3, H0674:3, H0591:3, H0625:3, S0422:3, L0800:3, L0773:3, L0792:3, L0666:3, S0052:3, S0028:3, L0759:3, H0542:3, H0556:2, H0341:2, H0402:2, S0354:2, S0376:2, S0046:2, H0559:2, H0575:2, H0590:2, H0581:2, H0024:2, H0266:2, H0553:2, H0032:2, H0673:2, H0087:2, H0264:2, H0100:2, H0494:2, H0529:2, L0774:2, L0493:2, L0659:2, L0790:2, L0664:2, H0518:2, S0044:2, L0747:2, L0780:2, L0605:2, L0599:2, L0593:2, H0721:2, H0171:1, L3642:1, L3644:1, S0114:1, H0583:1, L0785:1, H0419:1, H0255:1, H0589:1, H0638:1, H0125:1, S0418:1, S0444:1, H0151:1, S0476:1, H0619:1, S6026:1, H0261:1, H0431:1, H0392:1, H0069:1, H0075:1, H0635:1, T0070:1, H0156:1, H0618:1, S0010:1, H0318:1, H0310:1, H0052:1, H0251:1, T0110:1, H0046:1, H0439:1, H0086:1, H0081:1, H0057:1, H0051:1, H0375:1, H0109:1, H0416:1, S0318:1, S0314:1, H0030:1, H0111:1, L0455:1, H0040:1, H0056:1, H0623:1, T0041:1, T0042:1, S0210:1, S0002:1, S0426:1, L0598:1, L0641:1, L0764:1, L0768:1, L0807:1, L0514:1, L0658:1, L0783:1, L5623:1, L0788:1, L0663:1, L0665:1, S0374:1, H0519:1, S0122:1, H0659:1, H0658:1, H0666:1, H0672:1, S0328:1, H0521:1, H0522:1, S0406:1, H0555:1, H0478:1, H0727:1, L0742:1, L0755:1, L0731:1, S0011:1, S0026:1, H0543:1, H0423:1, H0422:1 and H0506:1.
212	HNECW49	639117	221	316 - 489	624	AR055:8, AR060:7, AR240:6, AR185:5, AR300:5, AR218:5, AR104:5, AR283:5, AR089:4, AR299:4, AR282:4, AR316:3, AR039:3, AR313:3, AR096:3, AR277:2, AR219:2, H0179:2 and H0402:1.
212	HNEDH88	815675	222	70 - 171	625	AR055:2, AR185:2, AR313:2, AR299:2, AR060:2, AR277:2, AR104:2, AR039:1, AR089:1, AR218:1, AR096:1, AR316:1, AR283:1, AR300:1, L0748:2 and H0179:1.
213	HNFAC50	815676	223	676 - 774	626	AR055:8, AR277:6, AR060:5, AR282:5, AR299:5, AR283:5, AR039:5, AR240:5, AR104:4, AR300:4, AR218:4, AR089:4, AR185:4, AR096:3, AR316:3, AR313:2, AR219:1, L0769:5, L0756:4, S0444:3, L0774:3, H0624:2, S0408:2, H0587:2, L0764:2, L0766:2, H0170:1, H0497:1, H0333:1, H0156:1, L0022:1, H0271:1, S0344:1, L0637:1, L0772:1, L0773:1, L0662:1, L0775:1, L0809:1, L0791:1, L0663:1, H0144:1, S0374:1, L3811:1, H0593:1, H0660:1, H0648:1, H0672:1, H0696:1, L0749:1, L0750:1, L0779:1, L0752:1, L0755:1, L0599:1, L0601:1 and H0667:1.
214	HNFHF34	722237	224	178 - 270	627	AR316:4, AR313:3, AR218:3, AR219:3, AR039:3, AR299:3, AR060:2, AR277:1, AR283:9, AR240:7, AR104:1, AR096:1, AR185:1, AR300:1, AR277:1, AR282:1, AR283:9, AR240:7, H0581:8, H0046:7, S0358:5, S0408:5, S0007:5, H0428:5, S0444:3, S0410:3, H0271:3, L0803:3, H0693:3, S0406:3, S0436:3, H0713:2, S0116:2, S0442:2, L3388:2, H0431:2, H0486:2, H0069:2, H0635:2, L0471:2, H0031:2, H0038:2, H0616:2, L0800:2, L0662:2, L0794:2, L0666:2, L3827:2, H0660:2, S0330:2, H0436:2, S0192:2, H0624:1, H0556:1, S0342:1, S0114:1, H0657:1, H0638:1, S0356:1, S0354:1, H0329:1, H0729:1, S0045:1, S0046:1, H0747:1, H0749:1, H0586:1, H0497:1, L3816:1, T0109:1, S0280:1, H0036:1, H0705:1, S0474:1, H0615:1, H0039:1, S0036:1, H0488:1, H0412:1, T0041:1, H0494:1, S0438:1, S0440:1, S0150:1, S0422:1, H0529:1, H0517:1, L0763:1, L0772:1, L0372:1, L0521:1, L0364:1, L0649:1, L0655:1, L0659:1, L0783:1, L5623:1, L0663:1,

							S0053:1, H0144:1, L3826:1, L3828:1, H0519:1, S0126:1, H0682:1, H0435:1, H0670:1, S0378:1, H0522:1, S0044:1, H0631:1, S0027:1, L0439:1, L0759:1, H0445:1, S0434:1, L0591:1, L0592:1, H0543:1 and H0506:1.
215	HNGAM58	688114	225	68 - 412	628		AR313:88, AR039:72, AR299:41, AR185:40, AR300:34, AR089:34, AR277:32, AR096:31, AR218:23, AR316:23, AR240:23, AR104:21, AR219:20, AR060:16, AR282:14, AR055:9, AR283:6 S0052:1
216	HNGBH53	532614	226	47 - 187	629		AR055:10, AR060:7, AR283:5, AR240:5, AR300:4, AR185:4, AR299:4, AR104:4, AR089:4, AR282:3, AR316:3, AR277:3, AR218:3, AR313:2, AR096:2, AR039:2, AR219:1 S0052:1
217	HNGDQ38	825389	227	205 - 384	630		S0052:1
218	HNGDX18	1145071	228	237 - 965	631		AR228:8, AR176:7, AR161:6, AR162:6, AR163:6, AR251:5, AR223:5, AR181:5, AR171:5, AR225:4, AR060:4, AR267:4, AR055:4, AR216:4, AR261:4, AR235:4, AR236:4, AR268:4, AR230:4, AR269:4, AR288:4, AR191:4, AR052:4, AR182:4, AR221:4, AR239:4, AR254:3, AR242:3, AR255:3, AR312:3, AR233:3, AR287:3, AR272:3, AR262:3, AR165:3, AR271:3, AR244:3, AR178:3, AR229:3, AR164:3, AR173:3, AR257:3, AR290:3, AR274:3, AR266:3, AR061:3, AR297:3, AR166:3, AR282:3, AR198:3, AR053:3, AR231:3, AR199:3, AR291:3, AR177:3, AR201:3, AR214:3, AR264:3, AR247:3, AR196:3, AR224:3, AR190:3, AR174:3, AR270:3, AR296:2, AR286:2, AR300:2, AR309:2, AR203:2, AR089:2, AR200:2, AR294:2, AR289:2, AR249:2, AR311:2, AR240:2, AR168:2, AR293:2, AR238:2, AR188:2, AR217:2, AR175:2, AR285:2, AR179:2, AR234:2, AR310:2, AR185:2, AR033:2, AR298:2, AR260:2, AR226:2, AR316:2, AR227:2, AR222:2, AR313:2, AR265:2, AR197:2, AR277:2, AR237:2, AR189:2, AR295:2, AR299:2, AR193:2, AR283:2, AR172:2, AR183:2, AR275:2, AR232:2, AR211:2, AR253:2, AR210:2, AR104:2, AR096:2, AR213:1, AR258:1, AR292:1, AR308:1, AR273:1, AR194:1, AR180:1, AR184:1, AR284:1, AR252:1, AR205:1 H0457:4, S0052:4, H0271:3, L0766:3, H0543:3, H0255:2, H0402:2, H0253:2, L0754:2, H0422:2, H0583:1, H0650:1, H0656:1, H0484:1, H0483:1, H0254:1, L3659:1, S0442:1, S0360:1, H0580:1, S0140:1, H0747:1, H0393:1, H0486:1, H0250:1, H0618:1, H0050:1, H0630:1, H0719:1, H0182:1, H0063:1, H0087:1, H0264:1, H0488:1, L0351:1, T0042:1, S0448:1, S0002:1, L0761:1, L0378:1, L0655:1, L4501:1, H0539:1, S0188:1, S0146:1, H0707:1, L0599:1, H0136:1, H0423:1 and H0677:1.
	HNGDX18	866177	391	231 - 629	794		
219	HNGDY34	566863	229	73 - 126	632		AR251:7, AR060:6, AR246:6, AR282:5, AR055:4, AR206:3, AR205:3, AR309:3, AR184:3, AR052:3, AR089:3, AR312:3, AR053:3, AR267:3, AR243:2, AR277:2, AR186:2, AR104:2, AR202:2, AR061:2, AR033:2, AR213:2, AR238:2, AR300:2, AR185:2, AR175:2, AR265:2, AR283:2, AR294:2, AR269:2, AR295:2, AR316:2, AR198:2, AR244:2, AR183:2, AR274:2, AR253:2, AR247:2, AR310:2, AR233:2, AR240:2, AR299:2, AR270:2, AR292:2, AR293:2, AR231:2, AR241:2, AR227:2, AR291:2, AR275:1, AR268:1, AR289:1, AR096:1, AR296:1, AR298:1, AR039:1, AR177:1, AR313:1, AR218:1, AR194:1, AR232:1, AR229:1, AR219:1, AR237:1



220	HNGEA34	815678	230	58 - 192	633	S0052:1 AR055:6, AR060:5, AR240:4, AR218:4, AR282:3, AR300:3, AR104:3, AR277:3, AR283:3, AR185:3, AR089:3, AR096:2, AR316:2, AR219:2, AR039:2, AR313:2, AR299:2 H0393:1 and S0052:1.
221	HNGGA68	638116	231	184 - 282	634	AR055:6, AR060:6, AR218:6, AR300:4, AR185:4, AR240:4, AR299:3, AR104:3, AR219:3, AR089:3, AR282:3, AR283:3, AR316:3, AR096:2, AR039:2, AR313:2, AR277:2 H0419:1, H0305:1 and S0052:1.
222	HNGIV64	561572	232	221 - 247	635	AR185:8, AR039:8, AR060:8, AR313:7, AR055:7, AR096:6, AR300:6, AR089:6, AR240:6, AR218:6, AR299:6, AR277:6, AR316:5, AR104:5, AR283:4, AR282:3, AR219:1 S0052:1
223	HNGJB41	852178	233	252 - 473	636	AR055:6, AR060:6, AR282:5, AR300:4, AR277:4, AR104:4, AR316:4, AR283:4, AR218:4, AR185:3, AR299:3, AR219:3, AR089:3, AR313:3, AR240:3, AR096:2, AR039:2 S0052:1
224	HNGKT41	836061	234	415 - 552	637	AR316:11, AR055:6, AR060:6, AR277:5, AR300:5, AR282:5, AR104:4, AR240:4, AR185:4, AR218:3, AR283:3, AR313:3, AR039:3, AR089:3, AR219:3, AR096:2, AR299:2 S0428:1
225	HNGNK44	834949	235	611 - 835	638	AR055:5, AR060:5, AR104:4, AR218:3, AR283:3, AR300:2, AR089:2, AR096:2, AR039:2, AR185:2, AR282:2, AR299:2, AR277:2, AR316:2, AR240:2, AR219:2, AR313:1 L0581:2 and S0428:1.
226	HNGNO53	836063	236	467 - 571	639	AR055:7, AR060:6, AR240:5, AR300:5, AR218:5, AR185:4, AR283:4, AR299:4, AR277:4, AR089:4, AR104:3, AR316:3, AR096:3, AR219:2, AR313:2, AR039:2, AR282:1 S0428:2 and L0439:1.
227	HNGPI25	834942	237	544 - 621	640	AR060:7, AR055:7, AR218:6, AR240:6, AR282:5, AR185:5, AR277:5, AR300:5, AR299:4, AR283:3, AR089:3, AR104:3, AR316:3, AR096:3, AR039:2, AR313:2, AR219:2 H0251:8, H0624:4, L0752:4, H0286:1, L0598:1, S0428:1 and H0144:1.
228	HNHCT47	634691	238	73 - 192	641	AR313:39, AR039:38, AR219:29, AR218:24, AR299:23, AR185:22, AR096:21, AR089:20, AR300:17, AR316:15, AR060:14, AR277:14, AR104:13, AR055:12, AR240:11, AR282:10, AR283:8 S0053:2 and S0046:1.
229	HNHFE71	834487	239	598 - 663	642	AR055:9, AR060:8, AR218:6, AR300:5, AR185:5, AR240:5, AR277:5, AR299:5, AR282:5, AR104:5, AR283:4, AR089:4, AR039:4, AR316:4, AR096:3, AR313:3, AR219:2 S0053:1
230	HNHGK22	597451	240	239 - 433	643	AR060:7, AR055:6, AR240:5, AR218:4, AR185:4, AR299:4, AR300:4, AR089:4, AR104:4, AR282:4, AR283:3, AR039:3, AR316:3, AR313:3, AR096:3, AR219:3 S0053:2
231	HNHHB10	634589	241	215 - 394	644	AR313:29, AR039:26, AR089:22, AR096:19, AR299:15, AR196:15, AR241:14, AR173:13, AR300:12, AR180:12, AR161:12, AR162:12, AR178:12, AR163:11, AR185:11, AR165:11, AR262:11, AR316:11, AR277:11, AR240:11, AR060:11, AR264:11, AR164:11, AR199:10, AR191:10, AR242:10, AR166:10,

						AR181:10, AR104:10, AR258:9, AR174:9, AR257:9, AR218:9, AR282:8, AR200:8, AR236:8, AR183:8, AR175:8, AR270:8, AR247:8, AR192:8, AR179:7, AR219:7, AR189:7, AR312:7, AR182:7, AR203:7, AR297:7, AR229:7, AR176:7, AR275:7, AR212:7, AR287:7, AR230:7, AR235:6, AR274:6, AR255:6, AR234:6, AR052:6, AR188:6, AR213:6, AR260:6, AR177:6, AR193:6, AR293:6, AR269:6, AR261:6, AR233:6, AR268:6, AR290:5, AR263:5, AR267:5, AR311:5, AR053:5, AR238:5, AR198:5, AR296:5, AR226:5, AR308:5, AR294:5, AR055:5, AR309:5, AR288:5, AR239:5, AR285:5, AR272:5, AR250:5, AR244:4, AR265:4, AR228:4, AR271:4, AR197:4, AR283:4, AR273:4, AR243:4, AR190:4, AR286:4, AR033:4, AR171:4, AR207:4, AR254:4, AR291:4, AR195:4, AR211:4, AR237:3, AR248:3, AR204:3, AR266:3, AR231:3, AR310:3, AR249:3, AR215:3, AR295:3, AR225:3, AR186:3, AR210:3, AR202:3, AR201:3, AR168:3, AR227:3, AR256:3, AR253:3, AR223:3, AR221:2, AR170:2, AR216:2, AR205:2, AR289:2, AR169:2, AR184:2, AR217:2, AR214:2, AR232:2, AR246:2, AR206:2, AR251:1, AR222:1, AR245:1, AR298:1, AR252:1, AR224:1, AR172:1, AR061:1 H0059:1 and S0053:1.
						H0059:1 and S0053:1.
						S0216:1
232	HNHK174	777856	242	127 - 159	645	
233	HNTBT17	855957	243	91 - 111	646	AR313:20, AR039:15, AR316:12, AR299:12, AR218:11, AR219:11, AR096:9, AR300:5, AR185:5, AR089:4, AR277:2, AR104:2, AR282:2, AR055:1, AR240:1 H0436:15, L0766:8, L0748:8, S0422:6, S0002:5, L0666:5, L0740:5, H0650:4, S0474:4, L0803:4, H0547:4, H0670:4, H0521:4, L0439:4, L0759:4, H0422:4, S0360:3, L0776:3, L0665:3, S0052:3, H0690:3, S0406:3, L0745:3, L0755:3, H0170:2, H0656:2, H0692:2, S0376:2, H0749:2, H0587:2, H0574:2, S0280:2, H0581:2, S0003:2, L0662:2, L0794:2, L0774:2, L0775:2, L0790:2, L0438:2, H0710:2, L0744:2, L0746:2, L0749:2, L0756:2, L0779:2, L0777:2, L0731:2, L0362:2, H0423:2, H0713:1, H0716:1, H0583:1, L3814:1, H0663:1, H0662:1, H0638:1, S0356:1, H0729:1, H0747:1, H0431:1, H0592:1, H0156:1, L0021:1, S0010:1, H0046:1, H0457:1, L0471:1, H0620:1, H0083:1, H0375:1, H0179:1, H0271:1, S0214:1, H0031:1, H0553:1, H0673:1, H0591:1, H0551:1, L0351:1, H0745:1, S0440:1, S0344:1, L0640:1, L0770:1, L0667:1, L0800:1, L0642:1, L0764:1, L0648:1, L0805:1, L0661:1, L0527:1, L0657:1, L0659:1, L0782:1, L0792:1, L0664:1, S0428:1, H0144:1, S0374:1, H0724:1, L0352:1, H0520:1, H0519:1, H0659:1, H0648:1, H0539:1, S0152:1, H0696:1, S0404:1, S3014:1, S0027:1, L0751:1, L0747:1, L0750:1, L0780:1, L0684:1, S0434:1, L0485:1, S0026:1, H0542:1, H0543:1, L0718:1, S0384:1 and H0506:1.
						S0026:1, H0542:1, H0543:1, L0718:1, S0384:1 and H0506:1.
234	HNTMH79	801921	244	48 - 164	647	AR313:28, AR219:16, AR218:14, AR096:14, AR089:14, AR316:14, AR039:11, AR299:11, AR277:11, AR283:10, AR240:9, AR300:9, AR185:8, AR055:8, AR282:8, AR060:5, AR104:5 L0748:14, L0809:10, L0747:9, L0777:7, H0740:6, L0717:6, L0766:6, L0794:5, L0745:5, S0360:4, H0457:4, S0422:4, L0771:4, L0749:4, L0759:4, H0395:3, H0305:3, H0393:3, H0318:3, L0764:3, L0804:3, L0776:3, L0655:3, L0666:3, L0439:3, L0750:3, L0758:3, S0116:2, H0402:2, H0586:2, S0474:2, S0438:2, S0440:2, H0529:2, L0770:2, L0775:2, L0806:2, H0672:2, H0436:2, L0746:2, L0779:2, L0731:2, H0543:2, L0615:1, H0556:1, H0685:1, S0218:1, H0749:1, S0222:1, H0592:1, H0497:1, H0013:1, H0052:1, H0050:1, H0057:1, H0687:1, H0119:1, H0553:1, H0124:1, H0634:1,

						H0063:1, H0560:1, H0561:1, L0769:1, L0638:1, L0637:1, L0761:1, L0646:1, L0800:1, L0662:1, L0803:1, L0807:1, L0659:1, L0783:1, L5622:1, L0790:1, L0665:1, H0520:1, H0593:1, H0689:1, H0659:1, S0380:1, H0521:1, H0576:1, L0744:1, L0755:1, H0445:1, L0589:1, L0485:1 and H0423:1.
235	HODAG07	655356	245	43 - 174	648	AR277:30, AR283:23, AR219:17, AR218:15, AR055:15, AR089:14, AR316:14, AR299:13, AR104:13, AR039:12, AR313:12, AR282:12, AR240:11, AR300:11, AR060:10, AR096:10, AR185:10 H0328:1, L0640:1, L0666:1 and L0748:1.
236	HODBB70	520196	246	173 - 256	649	AR055:7, AR218:6, AR060:5, AR104:5, AR240:4, AR300:4, AR299:4, AR096:4, AR219:4, AR283:4, AR039:3, AR185:3, AR089:3, AR316:3, AR282:3, AR277:2 H0328:1, L0789:1, L0742:1 and L0439:1.
237	HODBV05	825283	247	101 - 202	650	AR055:9, AR060:8, AR282:6, AR104:6, AR218:5, AR089:5, AR219:5, AR277:5, AR299:5, AR185:5, AR300:4, AR039:4, AR283:4, AR240:4, AR096:4, AR316:4, AR313:3 L0439:2, H0171:1, H0346:1, H0052:1, H0328:1, H0553:1, H0555:1 and L0758:1.
238	HODCZ32	836069	248	248 - 280	651	AR313:62, AR039:45, AR299:33, AR277:30, AR089:28, AR185:27, AR096:27, AR300:22, AR240:19, AR316:19, AR104:15, AR218:15, AR060:14, AR219:14, AR055:12, AR282:11, AR283:6 H0328:1
239	HOFNU55	897611	249	230 - 385	652	AR277:60, AR283:51, AR282:47, AR316:45, AR313:40, AR219:37, AR240:35, AR089:35, AR218:32, AR104:32, AR096:31, AR299:31, AR055:31, AR185:30, AR300:26, AR039:23, AR060:18 H0415:1
240	HOGBF01	772573	250	309 - 371	653	H0435:1
241	HORBS82	638293	251	21 - 140	654	H0706:2, L0809:2, S0360:1, L0623:1, H0122:1, H0041:1, H0095:1, H0292:1, H0424:1, S0364:1, L0794:1, L0787:1, L0663:1, H0780:1, H0435:1, L0743:1, L0747:1 and L0731:1.
242	HORBV76	839270	252	183 - 779	655	AR313:8, AR218:8, AR060:7, AR055:7, AR219:6, AR240:6, AR185:6, AR282:5, AR299:5, AR039:5, AR316:5, AR089:5, AR300:4, AR096:4, AR283:4, AR104:4, AR277:3 L0794:2, L0608:2, H0686:1, S0278:1, H0292:1, H0031:1, L0065:1, S0344:1, L0638:1, L0662:1, L0803:1, L0659:1, L0665:1, L0749:1 and L0780:1.
243	HOSEC25	688055	253	17 - 91	656	AR313:58, AR039:44, AR089:31, AR299:31, AR300:31, AR096:29, AR277:29, AR185:26, AR316:20, AR240:19, AR218:14, AR060:13, AR282:12, AR219:11, AR104:10, AR055:8, AR283:4 S0214:1 and L0776:1.
244	HOSEI81	562778	254	203 - 454	657	AR055:5, AR060:5, AR104:4, AR282:4, AR300:4, AR299:3, AR185:3, AR089:3, AR240:3, AR039:3, AR283:2, AR218:2, AR096:2, AR316:2, AR219:2, AR313:2, AR277:2 L0777:2, S0214:1 and H0539:1.
245	HOSEJ94	795132	255	848 - 934	658	AR219:24, AR218:23, AR316:17, AR089:16, AR096:16, AR055:15, AR185:14, AR313:14, AR299:14, AR283:13, AR039:13, AR060:12, AR240:11, AR300:10, AR282:8, AR104:8, AR277:5 L0731:8, L0766:6, S0474:4, L0598:4, L0774:4, H0547:4, L0752:4, H0486:3, S0003:3, L0775:3, L0745:3, L0362:3, H0170:2, H0657:2, H0733:2, H0038:2, S0440:2, S0210:2, L0770:2, L0651:2, L0555:2, L0776:2, L0655:2, L0665:2, L0438:2, S0330:2, H0539:2, L0439:2, L0758:2, L0594:2, S0412:2, H0394:1, S0040:1, L0002:1, H0650:1, H0663:1, S0358:1, S0360:1, L3649:1, L2255:1,

						H0441:1, H0497:1, H0574:1, H0635:1, H0156:1, H0575:1, H0036:1, H0251:1, L0163:1, H0083:1, H0594:1, S0214:1, H0328:1, H0644:1, L0055:1, H0674:1, H0634:1, H0412:1, S0438:1, S0422:1, S0426:1, UNKWN:1, H0529:1, L0520:1, L0625:1, L0637:1, L0627:1, L0772:1, L0646:1, L0764:1, L0773:1, L0521:1, L0662:1, L0768:1, L0522:1, L0650:1, L0375:1, L0806:1, L0656:1, L0790:1, L0666:1, L0663:1, L0664:1, S0374:1, H0659:1, H0672:1, H0710:1, H0696:1, S0027:1, S0028:1, L0740:1, L0750:1, L0777:1, L0753:1, L0759:1, L0592:1, L0608:1, L0361:1, S0192:1 and H0543:1.
246	HOUCA21	655359	256	200 - 301	659	S0040:1, T0042:1 and S0292:1.
247	HOUE92	580866	257	70 - 336	660	H0052:17, L0745:11, L0748:10, H0547:7, L0439:7, L0775:6, L0771:5, L0774:5, L0662:4, L0746:4, L0777:4, S0474:3, L0163:3, H0059:3, H0100:3, L0775:3, L0741:3, H0261:2, H0333:2, H0194:2, H0545:2, H0012:2, H0617:2, H0135:2, L0770:2, L0665:2, L0438:2, H0520:2, L0747:2, L0752:2, L0753:2, S0040:1, L0717:1, H0437:1, H0550:1, S6016:1, H0497:1, H0574:1, H0599:1, H0575:1, H0618:1, H0253:1, H0041:1, H0620:1, H0373:1, H0188:1, H0124:1, H0068:1, H0040:1, H0561:1, S0448:1, S0210:1, L0763:1, L0644:1, L0767:1, L0768:1, L0375:1, L0651:1, L0659:1, L0540:1, L5622:1, H0144:1, H0593:1, S0126:1, H0539:1, S0152:1, H0694:1, S0390:1, S0028:1, L0749:1, L0786:1, L0780:1, L0731:1, L0757:1, L0758:1, S0436:1, L0592:1 and S0276:1.
248	HOUED72	858547	258	144 - 179	661	AR313:145, AR096:124, AR219:123, AR282:123, AR240:96, AR218:92, AR316:89, AR104:74, AR299:71, AR089:68, AR185:68, AR277:63, AR039:61, AR300:53, AR283:44, AR060:43, AR055:41 S0040:1
249	HOUFS04	771564	259	520 - 738	662	AR218:41, AR219:38, AR096:23, AR185:23, AR277:22, AR299:22, AR282:20, AR055:18, AR316:17, AR039:16, AR089:14, AR240:13, AR283:13, AR104:12, AR300:10, AR313:10, AR060:10 L0745:15, S0414:6, H0351:5, H0013:5, S0422:5, L0803:5, H0144:4, H0413:3, H0519:3, L0754:3, L0759:3, S0242:3, H0624:2, H0580:2, S0045:2, L3655:2, H0421:2, H0375:2, H0428:2, H0553:2, L0598:2, L0775:2, L5622:2, L0666:2, L0664:2, L0665:2, H0520:2, H0547:2, S0126:2, H0672:2, S0380:2, H0521:2, L0743:2, L0744:2, L0605:2, H0171:1, H0556:1, H0685:1, S0040:1, S0114:1, H0657:1, S0212:1, S0444:1, H0733:1, H0734:1, H0749:1, S0132:1, H0619:1, L3388:1, H0411:1, S0278:1, H0549:1, S0222:1, L3816:1, H0486:1, S0280:1, H0575:1, L0105:1, H0581:1, H0052:1, H0545:1, H0594:1, S6028:1, H0687:1, S0250:1, H0031:1, S0364:1, L0455:1, H0124:1, H0591:1, H0038:1, S0450:1, L0763:1, L0638:1, L0637:1, L0662:1, L0794:1, L0649:1, L0654:1, L0382:1, L0792:1, L3811:1, L3824:1, L3828:1, H0435:1, H0518:1, H0696:1, H0436:1, S0432:1, S0390:1, S0037:1, S3014:1, S0028:1, S0124:1, L0751:1, L0756:1, L0779:1, L0777:1, L0780:1, L0752:1, L0755:1, S0031:1, L0599:1, S0196:1, H0423:1, H0422:1 and H0721:1.
250	HOUHI25	888279	260	188 - 250	663	AR219:18, AR218:16, AR055:8, AR104:6, AR096:5, AR316:5, AR039:5, AR300:5, AR060:4, AR277:4, AR089:3, AR299:3, AR185:3, AR283:3, AR282:2, AR240:2, AR313:1 S0436:7, H0551:6, L2985:5, H0599:5, L0805:5, L0756:5, L0758:5, L0759:5, L0754:4, L0747:4, L3655:3, H0545:3, S0003:3, L0375:3, H0144:3, L0755:3, S0442:2, L3649:2, S0045:2, L3816:2, H0013:2, L0471:2, H0373:2, H0051:2, H0560:2, S0422:2, L0768:2, L0803:2, L0650:2, L0659:2, L0438:2, L0439:2, L0740:2, L0750:2, L0779:2, L0757:2, S0242:2, H0739:1, H0624:1, S0040:1,

							S0342:1, S0116:1, S0212:1, S0444:1, H0747:1, L3280:1, H0357:1, H0587:1, L0021:1, S0010:1, L0105:1, S0474:1, H0544:1, H0046:1, S0051:1, H0266:1, H0622:1, H0032:1, H0388:1, H0598:1, H0413:1, S0438:1, H0641:1, S0002:1, L0770:1, L3904:1, L0662:1, L0776:1, L0809:1, L0519:1, L5622:1, L5623:1, L0663:1, L0664:1, L2260:1, L2381:1, L2673:1, L3827:1, H0520:1, S0126:1, L3832:1, L0753:1, S0434:1, L0599:1, S0011:1, H0667:1, L3560:1 and L3585:1.
251	HOVBD85	827362	261	252 - 332	664		AR218:13, AR219:12, AR096:5, AR313:2, AR316:2, AR055:1, AR060:1, AR282:1, AR240:1, H0252:1, H0428:1 and L0439:1.
252	HPCAL26	762822	262	1021 - 1113	665		L0659:11, S0126:11, L0731:11, S0192:11, L0666:9, L0777:7, T0049:5, S0358:5, L0771:5, L0757:5, S0360:4, S0440:4, L0740:4, L0758:4, S0212:3, S0356:3, S0046:3, H0369:3, H0545:3, L0662:3, L0774:3, L0809:3, H0519:3, L0752:3, S0011:3, H0295:2, H0662:2, S0468:2, H0012:2, H0024:2, H0356:2, H0616:2, H0268:2, H0412:2, L0646:2, L0803:2, S0013:2, L0754:2, L0747:2, L0759:2, S0040:1, S0418:1, S0442:1, S0376:1, H0676:1, L0717:1, H0550:1, S0222:1, H0574:1, L0021:1, H0575:1, H0036:1, H0590:1, H0618:1, T0048:1, H0309:1, H0596:1, T0110:1, H0546:1, H0046:1, H0123:1, H0014:1, S0003:1, S0022:1, H0428:1, H0622:1, H0031:1, H0673:1, L0455:1, H0316:1, H0598:1, H0163:1, H0038:1, H0433:1, H0413:1, T0069:1, S0438:1, H0633:1, H0647:1, S0210:1, L0770:1, L0769:1, L0768:1, L0794:1, L0519:1, L0789:1, L0790:1, L0664:1, L0665:1, H0144:1, S0330:1, S0136:1, H0696:1, S3014:1, S0206:1, L0751:1, L0749:1, L0756:1, L0779:1, S0031:1, S0242:1, S0194:1 and S0276:1.
253	HPEBA84	753957	263	533 - 643	666		AR313:5, AR240:4, AR299:4, AR185:4, AR300:4, AR060:4, AR055:3, AR089:3, AR096:2, AR282:2, AR039:2, AR218:2, AR316:2, AR277:1, AR219:1, AR104:1 L0591:2, L3643:1, S0420:1, L3388:1, H0057:1, H0166:1, L0648:1, L0518:1, L0809:1, L0519:1, L0754:1 and L0599:1.
254	HPFBA54	635539	264	258 - 395	667		H0169:1, H0130:1 and L0606:1.
255	HPFCI36	855966	265	94 - 153	668		AR218:18, AR219:16, AR313:14, AR089:9, AR055:7, AR282:6, AR060:6, AR316:6, AR185:6, AR299:5, AR240:5, AR039:5, AR300:4, AR104:4, AR283:4, AR096:4, AR277:2 L0591:4, L0754:3, H0450:2, H0486:2, H0046:2, S0003:2, H0494:2, S0422:2, L0659:2, S0126:2, H0659:2, L0750:2, L0601:2, H0170:1, H0556:1, H0657:1, S0420:1, S0354:1, H0734:1, H0749:1, H0455:1, H0403:1, H0600:1, H0013:1, H0156:1, H0599:1, H0744:1, H0082:1, S0214:1, H0622:1, H0031:1, H0673:1, H0169:1, H0090:1, H0038:1, H0022:1, H0560:1, L0643:1, L0771:1, L0773:1, L0655:1, L0807:1, L3872:1, L0792:1, L0665:1, L3811:1, S0378:1, H0518:1, S0152:1, H0521:1, L0748:1, L0749:1, L0757:1, L0759:1, S0434:1, L0596:1, L0605:1 and H0653:1.
256	HPJBU43	862058	266	242 - 295	669		AR283:11, AR055:10, AR060:9, AR039:7, AR299:6, AR277:6, AR300:6, AR104:5, AR185:5, AR240:5, AR089:5, AR313:5, AR096:5, AR316:4, AR282:4, AR218:3, AR219:3 S0152:1 and L0589:1.
257	HPMBX22	702012	267	211 - 270	670		H0046:16, L0362:15, L0766:11, L0754:8, L0747:4, L0731:4, L0439:3, S0212:2, H0013:2, H0251:2, L0471:2, S0003:2, H0674:2, S0422:2, L0769:2, L0663:2, L0665:2, L0438:2, L0740:2, H0445:2, L0589:2, H0170:1, T0002:1, H0686:1, H0717:1, S0134:1, H0657:1, H0459:1, S0442:1, S0360:1,

						S0410:1, L3649:1, H0729:1, S0468:1, H0431:1, H0587:1, H0486:1, H0196:1, H0596:1, H0565:1, H0571:1, H0566:1, H0024:1, H0275:1, S0628:1, H0615:1, H0031:1, H0644:1, H0591:1, H0634:1, S0440:1, L0640:1, L0770:1, L0642:1, L0794:1, L0649:1, L0803:1, L0804:1, L0650:1, L0774:1, L0775:1, L0805:1, L0661:1, L0783:1, L0809:1, L0666:1, L0664:1, H0520:1, H0547:1, H0519:1, H0684:1, H0539:1, S0406:1, H0732:1, L0748:1, L0750:1, L0779:1, S0434:1, S0106:1, S0026:1, H0423:1 and H0422:1.
258	HPMCJ84	562779	268	83 - 199	671	AR282:2, AR277:1 H0031:1
259	HPMCV30	612870	269	52 - 195	672	L0526:1, L0622:8, H0670:8, H0087:7, S0360:5, H0594:5, H0188:5, H0412:5, S0206:5, H0218:4, S0418:4, H0318:4, H0024:4, H0617:4, L0770:4, L0783:4, S0328:4, S0027:4, H0265:3, H0663:3, T0048:3, H0597:3, H0123:3, H0673:3, S0366:3, H0135:3, H0616:3, S0002:3, L0775:3, L0776:3, L0518:3, L0663:3, H0144:3, S0374:3, S0126:3, S0380:3, S3014:3, H0352:3, H0624:2, H0556:2, H0219:2, S0114:2, H0657:2, H0341:2, S0110:2, H0661:2, H0305:2, H0351:2, H0492:2, T0039:2, H0052:2, H0546:2, H0178:2, H0083:2, H0688:2, H0068:2, H0038:2, H0040:2, H0509:2, S0142:2, S0426:2, L0769:2, L0521:2, L0768:2, H0689:2, L0750:2, H0445:2, H0170:1, H0686:1, H0344:1, H0295:1, H0294:1, S0134:1, S0218:1, H0650:1, L0760:1, S0116:1, S0001:1, H0483:1, H0255:1, H0662:1, H0402:1, S0358:1, S0376:1, H0675:1, H0580:1, S0046:1, S0132:1, S0278:1, H0549:1, H0441:1, H0370:1, H0455:1, H0333:1, H0643:1, L0623:1, T0060:1, H0250:1, T0082:1, S0010:1, H0505:1, H0421:1, H0327:1, H0545:1, H0150:1, H0086:1, H0012:1, H0099:1, H0109:1, H0290:1, T0023:1, H0031:1, H0181:1, H0606:1, H0166:1, H0674:1, H0124:1, H0163:1, H0063:1, H0551:1, H0413:1, H0102:1, H0560:1, S0372:1, H0130:1, S0144:1, S0344:1, S0422:1, L0598:1, L0507:1, L0639:1, L0648:1, L0662:1, L0767:1, L0524:1, L0805:1, L0659:1, L0542:1, L0809:1, L0530:1, L0789:1, H0691:1, H0520:1, H0519:1, H0682:1, H0684:1, H0659:1, H0658:1, H0648:1, H0672:1, S0378:1, S0152:1, S0174:1, H0576:1, L0612:1, H0540:1, L0748:1, L0740:1, L0752:1, L0758:1, S0436:1, L0485:1, L0599:1, L0608:1, L0595:1, L0362:1, L0366:1, S0106:1, H0543:1, S0446:1, L0600:1 and H0008:1.
260	HPMFH77	702014	270	251 - 358	673	AR089:24, AR282:22, AR060:6, AR277:5, AR055:5, AR104:4, AR240:4, AR316:4, AR299:4, AR300:4, AR313:4, AR283:4, AR039:3, AR218:2, AR096:2, AR185:2 L0750:4, L0809:3, L0747:3, L0803:2, L0776:2, L0740:2, L0754:2, S0045:1, S0010:1, H0581:1, T0010:1, H0687:1, H0031:1, S0440:1, L0770:1, L0764:1, L0375:1, L0748:1 and L0731:1.
261	HPQCC53	570821	271	16 - 123	674	AR283:24, AR277:21, AR219:20, AR218:16, AR055:15, AR316:15, AR089:15, AR282:14, AR299:14, AR313:13, AR185:12, AR104:12, AR060:12, AR240:11, AR096:10, AR300:10, AR039:9 L0803:3, S0354:2, S0280:2, H0052:2, H0617:2, L0770:2, L0646:2, L0809:2, S0028:2, L0753:2, H0445:2, H0556:1, S6024:1, H0657:1, S0418:1, S0420:1, H0728:1, H0351:1, H0441:1, H0586:1, H0013:1, H0156:1, L0021:1, T0082:1, H0122:1, S0010:1, H0571:1, L0163:1, H0284:1, H0328:1, H0135:1, H0412:1, H0100:1, L0351:1, H0538:1, L0769:1, L0639:1, L0800:1, L0764:1, L0662:1, L0766:1, L0649:1, L0659:1, L0530:1, L0790:1, L4507:1, H0520:1, H0547:1, H0519:1, H0690:1,

							S0328:1, H0539:1, S0136:1, H0696:1, L0748:1, L0747:1, L0756:1, L0779:1, L0777:1, L0731:1, L0757:1, S0434:1, S0436:1, S0011:1, H0136:1 and S0196:1.
262	HPTRM02	812879	272	885 - 1127	675		H0617:7, H0087:6, H0657:5, S0410:3, L0754:3, S0356:2, L0717:2, H0150:2, H0687:2, H0424:2, H0551:2, L0769:2, L0774:2, L0743:2, L0758:2, L0592:2, H0556:1, T0002:1, H0686:1, H0685:1, T0049:1, H0663:1, S0442:1, S0444:1, S0360:1, S0476:1, H0550:1, H0486:1, H0250:1, L0021:1, T0048:1, S0474:1, S0049:1, H0052:1, H0309:1, H0597:1, H0544:1, H0014:1, H0107:1, S0628:1, H0622:1, H0644:1, H0102:1, S0038:1, L0351:1, S0450:1, S0344:1, S0002:1, L0764:1, L0766:1, L0805:1, L0776:1, L0655:1, L0661:1, L0657:1, L0809:1, L0666:1, L0665:1, L2652:1, L2260:1, L2261:1, H0689:1, H0435:1, H0521:1, H0696:1, H0555:1, L0744:1, L0439:1, L0749:1, L0777:1, L0755:1, L0759:1, S0436:1, L0597:1, L0599:1, L0366:1 and S0196:1.
263	HPWBA29	561956	273	194 - 235	676		AR313:19, AR039:14, AR218:11, AR277:11, AR089:11, AR299:10, AR096:10, AR185:10, AR300:9, AR060:8, AR219:8, AR316:8, AR055:8, AR240:8, AR104:7, AR282:6, AR283:4 S0044:1
264	HPWDK06	839825	274	405 - 485	677		H0717:11, L0743:11, L0748:10, L0731:6, L0754:5, H0427:4, H0716:3, H0575:3, H0428:3, H0031:3, L3904:3, L0517:3, H0696:3, S0044:3, L0758:3, H0411:2, H0597:2, H0620:2, H0024:2, H0687:2, H0135:2, L0770:2, L0662:2, L0775:2, L0518:2, L5622:2, H0144:2, L0744:2, L0751:2, L0750:2, S0436:2, L0605:2, H0713:1, S0116:1, S0212:1, H0669:1, H0662:1, S0418:1, S0360:1, H0728:1, S0045:1, H0619:1, L0717:1, H0550:1, L0623:1, L2487:1, S0280:1, L0021:1, H0599:1, H0706:1, S0010:1, S0474:1, S0049:1, H0309:1, H0085:1, H0231:1, H0545:1, H0050:1, L0471:1, H0057:1, L0163:1, S0051:1, T0010:1, S0312:1, H0688:1, H0169:1, L0456:1, H0551:1, T0067:1, H0379:1, H0059:1, T0069:1, S0038:1, H0652:1, S0344:1, H0743:1, L0520:1, L0371:1, L3905:1, L0772:1, L0771:1, L0768:1, L0378:1, L0653:1, L0776:1, L0807:1, L0659:1, L0542:1, L0647:1, L5623:1, L0664:1, L2654:1, H0593:1, S0126:1, H0690:1, H0684:1, H0658:1, H0670:1, H0660:1, H0539:1, S0146:1, S0027:1, S0028:1, S0032:1, L0439:1, L0747:1, L0777:1, L0604:1, L3592:1, H0506:1, L0462:1 and H0352:1.
265	HRADA42	827302	275	122 - 256	678		AR283:35, AR219:34, AR277:32, AR316:28, AR218:25, AR282:24, AR313:23, AR104:22, AR089:22, AR096:20, AR185:19, AR299:19, AR055:17, AR300:16, AR240:16, AR039:15, AR060:13 L0771:7, S0358:4, L0779:4, L0766:3, L0775:3, L0748:3, L0754:3, L0763:2, L0769:2, L0764:2, L0649:2, L0774:2, L0809:2, L0747:2, H0657:1, S0116:1, H0671:1, S0418:1, L0005:1, S0360:1, S0408:1, H0733:1, S0045:1, H0393:1, H0370:1, H0333:1, H0150:1, T0003:1, H0266:1, S0003:1, L0055:1, H0038:1, H0040:1, H0100:1, S0440:1, H0646:1, S0344:1, S0210:1, S0422:1, H0529:1, L0770:1, L0646:1, L0767:1, L0381:1, L0378:1, L0776:1, L0655:1, L0659:1, L2264:1, S0126:1, H0659:1, H0670:1, H0648:1, H0710:1, H0555:1, S0028:1, L0740:1, L0750:1, L0777:1, L0752:1, L0755:1, L0731:1, L0758:1, L0759:1, S0434:1, S0436:1, L0596:1, L0588:1, L0605:1, L0590:1, L0608:1 and H0543:1.
266	HRADF49	866481	276	169 - 930	679		AR244:12, AR296:6, AR205:6, AR183:6, AR292:6, AR104:5, AR249:5, AR291:5, AR285:5, AR298:5, AR206:5, AR289:4, AR240:4, AR293:4, AR275:4, AR270:4, AR295:4, AR294:4, AR284:3, AR213:3,

267	HRADN25	800628	277	198 - 395	680	AR186:3, AR060:3, AR286:3, AR234:3, AR229:3, AR282:3, AR267:3, AR184:3, AR096:3, AR283:3, AR033:3, AR251:3, AR300:2, AR313:2, AR316:2, AR185:2, AR039:2, AR299:2, AR218:2, AR256:2, AR089:2, AR219:2, AR061:2, AR243:2, AR055:2, AR269:2, AR277:2, AR233:2, AR238:2, AR182:2, AR268:2, AR175:2, AR259:2, AR266:2, AR232:2, AR258:2, AR227:2, AR315:2, AR263:1, AR226:1, AR309:1, AR314:1, AR053:1, AR290:1, AR052:1, AR231:1 H0618:9, L0751:7, L0754:6, L0758:6, H0253:5, L0748:5, H0580:3, L3816:3, H0052:3, L0770:3, L0663:3, H0556:2, H0733:2, H0351:2, H0706:2, H0567:2, H0625:2, S0142:2, L0639:2, L3905:2, L0659:2, L0543:2, L0749:2, S0436:2, H0423:2, L3643:1, H0381:1, S0212:1, H0254:1, H0663:1, H0638:1, S0418:1, H0741:1, H0735:1, S0046:1, S0046:1, S0476:1, S6022:1, H0549:1, H0550:1, S0222:1, H0370:1, H0497:1, H0574:1, L0622:1, L0623:1, L3655:1, H0101:1, H0427:1, S0280:1, H0122:1, H0194:1, H0596:1, H0570:1, H0081:1, H0620:1, H0014:1, H0083:1, H0355:1, H0510:1, H0424:1, H0030:1, H0553:1, H0628:1, S0364:1, S0366:1, H0038:1, H0551:1, H0100:1, L0351:1, H0494:1, S0438:1, H0633:1, S0144:1, S0422:1, L0371:1, L0769:1, L3904:1, L0772:1, L0648:1, L0497:1, L0375:1, L0511:1, L0666:1, L0709:1, L0710:1, H0144:1, L3811:1, L3824:1, H0520:1, H0593:1, H0682:1, H0670:1, H0672:1, H0539:1, L3833:1, S0044:1, H0626:1, H0732:1, S3012:1, S3014:1, S0027:1, S0028:1, L0779:1, L0584:1, L0608:1, L0593:1, H0667:1 and H0542:1.
268	HRADT25	800737	278	233 - 424	681	AR277:30, AR283:24, AR104:22, AR219:21, AR316:20, AR282:18, AR218:18, AR089:17, AR313:17, AR096:17, AR240:16, AR299:14, AR185:14, AR300:13, AR060:12, AR039:12, AR055:12 H0556:10, H0618:6, H0253:6, L0748:6, L0758:6, H0305:5, L0742:5, H0038:4, L0439:4, L0592:3, H0013:2, H0194:2, H0545:2, H0009:2, H0014:2, H0617:2, H0087:2, L0769:2, L0774:2, L0776:2, L0665:2, L0438:2, H0690:2, H0539:2, S0380:2, L0747:2, L0779:2, H0265:1, H0657:1, S0420:1, S0376:1, H0734:1, S0278:1, H0455:1, H0333:1, H0632:1, H0581:1, S0049:1, H0052:1, H0123:1, S0362:1, H0687:1, H0688:1, H0606:1, H0673:1, H0135:1, H0090:1, H0591:1, H0040:1, H0616:1, S0438:1, S0142:1, L0638:1, L4747:1, L0796:1, L5565:1, L0761:1, L0643:1, L0645:1, L0662:1, L0768:1, L0794:1, L0775:1, L0375:1, L0378:1, L0655:1, L0382:1, L0793:1, L0666:1, L0663:1, S0053:1, S0374:1, H0547:1, H0658:1, H0660:1, H0651:1, H0521:1, S0406:1, H0555:1, H0436:1, S0390:1, S3014:1, S0027:1, L0743:1, L0777:1, L0731:1, H0707:1, S0436:1, H0543:1 and H0422:1.
269	HRDAI17	560720	279	578 - 673	682	AR277:8, AR282:8, AR283:7, AR316:4, AR055:4, AR185:4, AR104:3, AR096:3, AR300:3, AR299:3, AR240:3, AR089:3, AR039:3, AR060:3, AR313:2, AR219:2, AR218:2 H0555:2 and S0356:1.
270	HRDDQ39	840405	280	215 - 355	683	H0031:2, L0758:2, H0013:1, H0124:1, L0369:1, L0792:1, S0216:1, L0745:1 and L0753:1. AR313:36, AR039:33, AR185:27, AR299:20, AR089:18, AR300:17, AR096:17, AR240:16, AR218:15, AR277:14, AR316:13, AR060:11, AR219:10, AR104:9, AR055:8, AR282:7, AR283:7 S0001:2, H0436:2, S0134:1, H0657:1, H0441:1, H0009:1, H0123:1, H0050:1, H0428:1, H0124:1, H0529:1, H0521:1 and H0352:1.
271	HRDER22	688056	281	32 - 61	684	AR283:14, AR104:12, AR296:12, AR289:11, AR298:11, AR060:11, AR089:10, AR291:10, AR284:10,



272	HRDFK37	840381	282	120 - 152	685	AR292:10, AR266:10, AR286:10, AR055:9, AR270:9, AR285:9, AR282:9, AR247:9, AR294:8, AR033:8, AR293:8, AR243:8, AR277:8, AR263:8, AR238:8, AR183:8, AR240:8, AR295:8, AR299:8, AR241:8, AR269:7, AR281:7, AR316:7, AR185:7, AR192:7, AR182:7, AR194:7, AR218:7, AR177:7, AR290:7, AR184:7, AR061:7, AR186:7, AR267:7, AR219:6, AR246:6, AR175:6, AR202:6, AR204:6, AR274:6, AR268:6, AR229:6, AR206:6, AR096:6, AR251:6, AR234:6, AR256:6, AR232:6, AR300:6, AR198:5, AR313:5, AR039:5, AR273:5, AR205:5, AR259:5, AR227:5, AR275:5, AR310:5, AR052:5, AR258:5, AR233:5, AR226:5, AR312:4, AR237:4, AR271:4, AR248:4, AR309:4, AR253:4, AR053:4, AR244:4, AR280:4, AR231:4, AR213:4, AR315:4, AR179:3, AR249:3, AR265:3, AR314:2, L0769:5, L0751:5, L0770:4, L0758:3, H0716:2, H0617:2, L0771:2, L0803:2, L0806:2, L0809:2, L0789:2, L0740:2, L0779:2, L0600:2, H0402:1, S0420:1, L0005:1, S0442:1, S0360:1, H0637:1, H0728:1, H0261:1, S0222:1, H0370:1, H0392:1, H0438:1, H0592:1, H0586:1, L0622:1, L0623:1, H0427:1, L0021:1, H0575:1, H0618:1, H0581:1, H0123:1, H0012:1, H0039:1, H0424:1, S0364:1, H0124:1, H0087:1, H0412:1, L0800:1, L0648:1, L0662:1, L0774:1, L0805:1, L0657:1, L0658:1, L0542:1, L5623:1, L0788:1, L0666:1, L0665:1, L3825:1, H0547:1, H0521:1, S0406:1, H0576:1, L0742:1, L0777:1 and L0366:1.
273	HRGBD54	828436	283	1958 - 1990	686	H0556:4, L0731:3, H0124:2, L0766:2, L0809:2, L0747:2, L0603:2, S0218:1, H0657:1, S0116:1, H0549:1, H0550:1, H0250:1, H0253:1, H0052:1, H0083:1, H0355:1, L0483:1, H0181:1, H0617:1, H0032:1, S0364:1, H0264:1, H0100:1, H0494:1, L0065:1, L0770:1, L0769:1, L0772:1, L0764:1, L0662:1, L0768:1, L0387:1, L0657:1, L0658:1, L0541:1, S0052:1, S0374:1, L0565:1, H0547:1, S0406:1, H0478:1, L0740:1, L0779:1, L0757:1, L0759:1, H0444:1, H0445:1, L0592:1 and L0595:1.
274	HSAVA08	580870	284	66 - 146	687	L0438:4, T0049:2, H0251:2, H0050:2, L0483:2, H0551:2, H0413:2, L0748:2, L0755:2, L0599:2, H0170:1, H0650:1, H0657:1, S0212:1, H0662:1, H0402:1, S0444:1, S0132:1, L0717:1, H0574:1, H0013:1, H0156:1, H0599:1, H0581:1, L0471:1, H0011:1, H0024:1, H0266:1, S0250:1, S0214:1, T0067:1, L0065:1, L0796:1, L0764:1, L0794:1, L0766:1, L0659:1, L0666:1, H0144:1, H0547:1, H0519:1, H0593:1, H0134:1, S0114:1, L0744:1, L0747:1, L0758:1, S0434:1 and H0543:1.
275	HSAWN53	634697	285	159 - 347	688	AR313:39, AR039:39, AR299:18, AR089:17, AR096:17, AR185:16, AR277:16, AR300:16, AR104:12, AR316:12, AR240:10, AR219:10, AR218:9, AR060:9, AR282:9, AR055:8, AR283:5, S0114:2
276	HSAWZ40	634000	286	124 - 237	689	AR277:14, AR313:13, AR219:10, AR299:9, AR039:9, AR089:9, AR055:9, AR185:9, AR104:8, AR218:8, AR300:8, AR283:8, AR316:8, AR282:8, AR060:8, AR096:7, AR240:6, S0114:1
277	HSDZM54	637870	287	445 - 552	690	AR283:11, AR039:8, AR218:8, AR060:8, AR219:8, AR313:8, AR055:7, AR089:7, AR185:7, AR096:6, AR299:6, AR316:6, AR240:6, AR277:5, AR282:5, AR104:5, AR300:4, S0114:1
						AR060:424, AR055:413, AR299:314, AR185:295, AR277:232, AR104:224, AR283:216, AR089:202, AR282:188, AR300:180, AR039:167, AR316:159, AR240:126, AR096:104, AR219:88, AR218:76, AR313:63

278	HSHAX04	812178	288	42 - 215	691	H0455:1 AR299:18, AR219:18, AR104:17, AR218:17, AR277:17, AR313:16, AR316:15, AR283:14, AR055:13, AR096:13, AR039:12, AR240:12, AR060:12, AR282:11, AR089:11, AR185:10, AR300:10 L0731:6, H0265:4, L0483:4, H0424:4, H0253:3, H0318:3, L0774:3, L0769:3, L0774:3, L0776:3, S0037:3, L0742:3, L0750:3, L0755:3, S0360:2, H0581:2, H0266:2, H0213:2, H0124:2, H0413:2, L0766:2, L0659:2, L0809:2, S0314:2, L0749:2, L0757:2, L0758:2, L0759:2, L0596:2, L0595:2, H0543:2, H0422:2, H0686:1, H0685:1, S0040:1, H0295:1, H0294:1, S0430:1, H0638:1, S0418:1, S0420:1, S0354:1, S0358:1, S0376:1, S0045:1, H0586:1, H0497:1, H0333:1, H0486:1, H0069:1, H0575:1, H0618:1, H0052:1, H0085:1, H0009:1, S0051:1, H0083:1, H0284:1, H0428:1, H0417:1, H0553:1, H0628:1, H0038:1, H0280:1, H0494:1, H0625:1, S0150:1, S0426:1, L0667:1, L0646:1, L0764:1, L0773:1, L0648:1, L0767:1, L0768:1, L0375:1, L0806:1, L0519:1, L0666:1, L0663:1, H0698:1, H0689:1, H0539:1, H0518:1, S0027:1, S0028:1, L0747:1, L0752:1, H0707:1, L0597:1, L0581:1, L0361:1, H0653:1, H0542:1 and H0506:1.
279	HSHBF76	715838	289	129 - 161	692	L0747:7, H0599:5, H0622:4, L0764:4, L0794:4, L0659:4, L0005:3, H0144:3, L0749:3, L0750:3, S0046:2, H0013:2, H0046:2, H0031:2, L0770:2, L0761:2, L0649:2, L0806:2, L0809:2, L0744:2, L0754:2, L0755:2, L0588:2, L0603:2, H0171:1, H0685:1, S0212:1, S0376:1, S0132:1, H0645:1, H0619:1, S6022:1, H0574:1, L0738:1, L0157:1, H0030:1, H0135:1, H0616:1, H0494:1, L0800:1, L0771:1, L0773:1, L0662:1, L0803:1, L0783:1, L0789:1, L0665:1, S0374:1, H0539:1, S0121:1, S0037:1, S0027:1, L0751:1, L0756:1, L0779:1, L0731:1, L0758:1, H0653:1 and H0352:1.
280	HSKDR27	580874	290	473 - 556	693	AR055:9, AR104:9, AR218:7, AR060:7, AR299:6, AR185:6, AR039:6, AR240:5, AR089:5, AR219:5, AR300:5, AR283:5, AR316:4, AR313:4, AR096:3, AR277:3, AR282:2 S0027:95, S0192:54, S3014:53, S0126:42, S0040:35, H0424:23, S0028:22, S0037:19, S3012:16, H0213:13, T0006:12, H0250:11, S0032:11, L0744:11, T0040:10, H0124:10, H0429:10, L0740:10, L0588:10, L0754:9, H0545:8, H0280:8, S0194:8, S0196:7, H0392:6, T0039:6, H0150:6, H0039:6, S0206:6, L0743:6, L0731:6, S0342:5, S0212:5, S0045:5, H0486:5, H0575:5, H0014:5, H0090:5, H0551:5, H0100:5, S0044:5, S0011:5, H0255:4, H0318:4, H0271:4, S0022:4, H0031:4, H0181:4, H0032:4, H0038:4, T0067:4, S0124:4, L0747:4, L0749:4, H0402:3, H0309:3, H0046:3, S0250:3, H0068:3, H0087:3, H0059:3, S0142:3, S0053:3, H0419:2, S0116:2, S0408:2, S0132:2, S0278:2, S022:2, H0331:2, T0060:2, H0069:2, H0427:2, H0599:2, T0082:2, H0253:2, H0546:2, H0086:2, H0123:2, H0024:2, H0015:2, H0510:2, H0428:2, T0023:2, H0163:2, H0063:2, H0509:2, L0772:2, L0805:2, S0052:2, H0547:2, H0518:2, L0748:2, L0751:2, L0745:2, L0750:2, L0777:2, L0755:2, L0757:2, H0445:2, L0590:2, L0599:2, S0026:2, S0242:2, H0171:1, H0265:1, H0716:1, H0294:1, S0298:1, H0662:1, H0450:1, S0360:1, H0329:1, S0046:1, H0411:1, S6022:1, H0431:1, H0357:1, H0455:1, H0586:1, H0587:1, L0021:1, H0042:1, T0048:1, H0505:1, H0052:1, H0251:1, H0235:1, H0231:1, H0544:1, H0050:1, H0051:1, H0071:1, H0083:1, H0060:1, H0266:1, H0188:1, H0292:1, S0214:1, H0328:1, H0033:1, H0417:1, H0553:1, H0628:1, H0617:1, H0606:1, H0383:1, H0212:1, H0388:1, H0135:1, H0040:1, H0487:1, H0413:1, T0069:1, H0560:1, H0538:1, S0210:1, L0763:1,

281	HSLHG78	846148	291	647 - 859	694	L0646:1, L0641:1, L0649:1, L0803:1, L0652:1, L0629:1, L0659:1, L0787:1, L0665:1, H0435:1, H0528:1, H0521:1, H0555:1, L0779:1, L0581:1, S0276:1 and H0008:1.
						AR096:21, AR055:6, AR039:6, AR299:6, AR104:6, AR185:6, AR060:4, AR300:4, AR313:4, AR240:3, AR316:3, AR089:2, AR283:2, AR277:2, AR282:1 L0777:9, L0759:7, L0740:6, L0756:6, L0665:5, L0771:4, L0731:4, L0637:3, S0028:3, L0744:3, L0662:2, L0803:2, L0809:2, L3811:2, L0751:2, L0779:2, L0362:2, H0739:1, H0624:1, H0713:1, S6024:1, H0733:1, S0220:1, T0039:1, L3655:1, H0156:1, L0021:1, L0471:1, H0644:1, H0032:1, H0316:1, H0488:1, H0641:1, L0638:1, L0641:1, L0774:1, L0776:1, L0807:1, L0636:1, L0787:1, L0789:1, L0790:1, H0144:1, H0726:1, H0478:1, S3012:1, S0206:1, L0439:1, L0749:1, L0750:1, L0758:1, L0599:1 and S0242:1.
282	HSLHX15	777861	292	485 - 610	695	AR060:8, AR055:7, AR218:6, AR240:5, AR300:5, AR282:4, AR185:4, AR089:4, AR283:4, AR104:4, AR299:4, AR277:3, AR316:3, AR219:3, AR096:3, AR039:2, AR313:1 T0040:1, L0564:1, S0028:1 and L0480:1.
283	HSNAP85	784054	293	941 - 955	696	AR218:36, AR219:31, AR313:20, AR089:16, AR055:16, AR299:13, AR185:13, AR316:10, AR060:9, AR104:8, AR300:8, AR282:8, AR096:7, AR039:7, AR277:6, AR283:5, AR240:5 L0105:11, L0754:10, L0803:9, L0777:8, L0740:6, L0770:4, L0649:4, L0805:4, L0731:4, S0212:3, L0766:3, L0752:3, L0599:3, H0265:2, L3643:2, H0656:2, S0418:2, S0444:2, S0360:2, H0581:2, L0157:2, T0023:2, H0038:2, H0413:2, S0422:2, H0529:2, L0794:2, L0774:2, L0654:2, L0776:2, L0666:2, L0663:2, L0665:2, H0547:2, H0696:2, S0027:2, L0743:2, L0744:2, L0750:2, L0779:2, L0759:2, S0192:2, S0242:2, H0624:1, S0134:1, H0341:1, H0663:1, H0664:1, H0729:1, H0722:1, S0045:1, S0476:1, H0619:1, H0610:1, H0497:1, L3816:1, H0486:1, H0013:1, H0575:1, H0318:1, H0545:1, H0569:1, L0471:1, H0328:1, H0615:1, H0553:1, H0163:1, H0040:1, H0551:1, H0412:1, S0370:1, S0438:1, L0646:1, L0521:1, L0662:1, L0804:1, L0775:1, L0655:1, L0658:1, L0634:1, L0809:1, S0374:1, L3824:1, L3826:1, H0435:1, H0660:1, H0672:1, S0378:1, H0754:1, H0576:1, S0390:1, S3014:1, S0206:1, L0747:1, L0758:1, L0608:1, S0026:1, S0194:1 and H0506:1.
284	HSNAZ09	527221	294	164 - 208	697	H0163:1 and L0748:1.
285	HSOAH16	827058	295	206 - 334	698	AR282:2 H0343:1
286	HSQBF66	560726	296	229 - 429	699	AR313:16, AR039:13, AR089:11, AR299:10, AR185:9, AR277:8, AR055:8, AR060:8, AR240:8, AR096:8, AR300:8, AR104:7, AR316:7, AR282:7, AR218:6, AR283:5, AR219:3 S0026:1
287	HSQES57	831222	297	195 - 989	700	AR060:15, AR185:14, AR299:14, AR089:13, AR240:12, AR218:11, AR282:11, AR277:10, AR104:10, AR055:9, AR300:9, AR096:9, AR316:9, AR219:8, AR313:8, AR039:8, AR283:7 L0751:4, L0747:4, L0769:3, L0662:3, L0809:3, L0748:3, H0624:2, H0618:2, H0050:2, L0770:2, L0764:2, L0766:2, L0744:2, H0352:2, H0686:1, S0040:1, S0114:1, H0657:1, S0116:1, L0988:1, S0444:1, H0586:1, H0587:1, H0013:1, H0123:1, S0250:1, H0166:1, S0438:1, S0440:1, L0639:1, L0643:1, L0771:1, L0521:1, L0803:1, L0774:1, L0379:1, L0807:1, L0783:1, L5623:1, S0374:1,

288	HSRBE06	871264	298	128 - 193	701	L3660:1, H0593:1, S0404:1, S0406:1, L0743:1, L0750:1, L0777:1, L0753:1, L0757:1, L0758:1, L0599:1, S0026:1 and L2842:1.
289	HSRFD18	840771	299	67 - 153	702	AR313:33, AR039:26, AR299:17, AR277:15, AR096:14, AR089:14, AR300:13, AR185:12, AR316:11, AR282:10, AR218:9, AR240:9, AR104:9, AR219:7, AR060:7, AR055:5, AR283:4, S0011:3, H0306:1, H0402:1, L0004:1, H0486:1, H0050:1, S0051:1, H0494:1 and S0002:1. AR055:2, AR039:1 L0754:10, S0422:5, S0022:4, L0803:4, L0748:4, L0747:4, L0591:4, H0486:3, L0766:3, L0805:3, L0526:3, L0665:3, S0434:3, S0212:2, S0444:2, S0360:2, S0222:2, L3816:2, H0013:2, H0596:2, L0471:2, H0166:2, H0591:2, H0509:2, L0646:2, L0662:2, L0666:2, L0664:2, S0374:2, L0779:2, L0777:2, L0759:2, S0436:2, H0624:1, H0170:1, S0114:1, S0001:1, H0671:1, H0663:1, H0402:1, H0305:1, S0442:1, S0408:1, H0329:1, H0742:1, L3387:1, H0581:1, H0421:1, H0194:1, H0263:1, H0597:1, H0569:1, H0355:1, H0510:1, H0179:1, H0687:1, H0615:1, L0483:1, H0553:1, H0644:1, H0673:1, H0674:1, H0100:1, S0450:1, H0714:1, L0763:1, L0770:1, L0761:1, L0649:1, L0776:1, L0518:1, L0790:1, L0791:1, L0792:1, L0663:1, H0547:1, H0670:1, H0521:1, H0696:1, S0406:1, H0555:1, H0478:1, L0780:1, H0707:1, S0276:1 and H0543:1.
290	HSSDI26	560722	300	253 - 318	703	AR313:14, AR039:11, AR299:9, AR185:8, AR089:8, AR277:8, AR300:7, AR218:6, AR060:6, AR240:6, AR055:6, AR096:6, AR316:5, AR104:5, AR283:4, AR282:4, AR219:3, H0135:1
291	HSSEA64	853395	301	58 - 246	704	AR240:12, AR055:11, AR060:10, AR277:9, AR282:9, AR089:9, AR096:8, AR218:8, AR283:7, AR219:7, AR104:6, AR300:6, AR185:6, AR316:6, AR299:5, AR039:5, AR313:4 H0052:17, L0745:11, L0748:10, L0777:8, L0755:8, H0547:7, L0439:7, L0766:6, L0774:6, L0771:5, L0662:4, L0746:4, S0474:3, L0163:3, H0059:3, L0100:3, L0770:3, L0775:3, L0665:3, L0741:3, L0751:3, L0758:3, L0759:3, H0261:2, H0333:2, H0618:2, H0194:2, H0545:2, H0012:2, H0617:2, H0135:2, L0763:2, L0769:2, L0768:2, L0657:2, L0438:2, H0520:2, H0539:2, S0152:2, L0747:2, L0752:2, L0753:2, S0436:2, L0588:2, S0040:1, T0049:1, H0657:1, H0663:1, S0420:1, S0358:1, S0360:1, H0675:1, H0645:1, L0717:1, H0437:1, H0550:1, S016:1, H0497:1, H0574:1, H0599:1, H0575:1, H0253:1, H0041:1, H0620:1, H0373:1, H0375:1, H0188:1, H0181:1, H0124:1, H0068:1, H0040:1, H0561:1, S0448:1, S0440:1, S0210:1, S0002:1, L0638:1, L0639:1, L0627:1, L0644:1, L0773:1, L0767:1, L0387:1, L0375:1, L0651:1, L0806:1, L0776:1, L0659:1, L0540:1, L5622:1, L2261:1, H0144:1, H0593:1, S0126:1, H0694:1, H0134:1, H0555:1, S0390:1, S0028:1, L0749:1, L0786:1, L0780:1, L0731:1, L0757:1, L0605:1, L0592:1, S0026:1 and S0276:1.
292	HSSEF77	658725	302	184 - 366	705	H0617:7, L0750:7, H0556:5, L0769:5, L0783:5, L0758:5, L0759:5, L0665:4, L0741:4, S0132:3, L0761:3, L0742:3, L0439:3, L0755:3, L0592:3, H0618:2, H0620:2, H0038:2, L0771:2, L0662:2, L0659:2, L0666:2, S0126:2, H0670:2, S0328:2, S0380:2, L0747:2, L0753:2, L0731:2, H0395:1, H0295:1, H0294:1, H0657:1, H0656:1, H0341:1, H0484:1, H0663:1, H0638:1, S0356:1, S0444:1, H0741:1, L3271:1, H0549:1, H0550:1, H0370:1, H0455:1, H0632:1, H0486:1, T0039:1, T0112:1, H0156:1, H0581:1, H0052:1, H0545:1, H0046:1, H0150:1, H0081:1, S0051:1, H0107:1, H0061:1,

						H0188:1, H0288:1, S0250:1, H0428:1, H0135:1, H0163:1, H0090:1, H0616:1, T0004:1, S0438:1, L0770:1, L0796:1, L0637:1, L0772:1, L0372:1, L0646:1, L0521:1, L0768:1, L0766:1, L5574:1, L0774:1, L0775:1, L0806:1, L0776:1, L0807:1, L0657:1, L0658:1, L0540:1, L0384:1, L0809:1, L0663:1, L0438:1, H0672:1, H0754:1, S0188:1, S0406:1, H0436:1, H0576:1, S014:1, L0748:1, L0779:1, L0757:1 and H0506:1.
293	HSSF38	742512	303	264 - 641	706	AR218:169, AR219:154, AR240:64, AR185:42, AR096:42, AR039:40, AR055:36, AR316:29, AR104:24, AR299:23, AR089:21, AR060:18, AR313:17, AR283:14, AR300:14, AR282:10, AR277:8
294	HSSG158	747714	304	245 - 361	707	AR277:4, AR282:3, AR055:2, AR185:2, AR299:2, AR104:2, AR218:2, AR060:2, AR240:2, AR089:2, AR219:1, AR283:1, AR039:1, AR300:1, AR316:1, AR313:1 L0749:2, H0135:1, L0558:1 and L0748:1.
295	HSWBE76	751308	305	380 - 559	708	AR277:11, AR282:11, AR283:10, AR219:8, AR218:8, AR104:7, AR060:7, AR240:6, AR316:6, AR299:6, AR185:6, AR300:5, AR089:5, AR039:5, AR055:5, AR096:5, AR313:4 L0777:4, L0751:3, L0648:2, L0779:2, L0753:2, S0342:1, H0484:1, H0661:1, S0358:1, L0009:1, H0411:1, S6014:1, H0546:1, H0123:1, H0188:1, S0366:1, H0413:1, S0344:1, H0529:1, L0769:1, L0627:1, L0378:1, L0774:1, L0776:1, L0655:1, L0663:1, S0380:1, H0478:1, L0743:1, L0750:1 and S0196:1.
296	HSXCP38	895392	306	211 - 255	709	AR104:7, AR055:5, AR060:4, AR039:2, AR185:2, AR240:2, AR089:2, AR282:2, AR277:2, AR316:2, AR299:2, AR313:2, AR300:2, AR283:1, AR218:1, AR096:1 L0439:3, L3655:1, H0050:1, T0010:1, S0036:1, L0438:1 and L0759:1.
297	HSYB106	740766	307	232 - 333	710	AR313:46, AR039:40, AR096:25, AR185:20, AR300:20, AR089:20, AR299:18, AR104:18, AR240:17, AR316:17, AR219:16, AR277:16, AR218:14, AR060:12, AR282:10, AR055:4, AR283:3 H0159:2, H0663:2, H0024:2, H0059:2, H0543:2, H0556:1, L0222:1, L3643:1, H0255:1, H0431:1, T0039:1, H0599:1, S0010:1, T0048:1, H0251:1, H0266:1, H0032:1, H0551:1, H0100:1, S0015:1, S0370:1, H0743:1, L0369:1, L0627:1, L0519:1, L0663:1, L0665:1, H0691:1, H0696:1, H0627:1, S0028:1, L0744:1, L0740:1, L0777:1, S0434:1, L0588:1, L0604:1 and H0422:1.
298	HT3BF49	838620	308	306 - 320	711	H0271:2, L0791:2, L0439:2, H0159:1, H0561:1, L0774:1, S0052:1 and L0779:1.
299	HT5GR59	801930	309	135 - 230	712	AR240:19, AR096:15, AR316:10, AR300:9, AR055:9, AR039:8, AR313:8, AR282:8, AR277:7, AR185:7, AR060:7, AR219:7, AR218:6, AR299:6, AR104:6, AR283:6, AR089:5 H0584:36, H0585:22, H0141:11, H0167:9, H0457:7, H0521:6, S0474:4, H0575:3, L0731:3, H0265:2, H0556:2, H0581:2, L0761:2, H0543:2, H0140:1, H0638:1, S0358:1, S0140:1, H0747:1, H0619:1, H0497:1, H0559:1, H0069:1, H0635:1, H0427:1, S0280:1, H0252:1, H0477:1, L0667:1, L0768:1, L0775:1, L0659:1, L0791:1, L0792:1, S0053:1, L0777:1, L0758:1, H0445:1 and H0506:1.
300	HTAE178	637684	310	632 - 646	713	AR249:6, AR060:5, AR248:5, AR241:4, AR202:4, AR055:4, AR273:4, AR244:4, AR053:4, AR184:3, AR052:3, AR253:3, AR186:3, AR182:3, AR213:3, AR206:3, AR175:3, AR251:3, AR270:3, AR282:3, AR312:3, AR274:2, AR061:2, AR286:2, AR300:2, AR269:2, AR243:2, AR309:2, AR298:2, AR192:2, AR246:2, AR089:2, AR185:2, AR275:2, AR316:2, AR299:2, AR268:2, AR233:2, AR240:2,

						AR283:2, AR310:2, AR238:2, AR198:2, AR294:2, AR277:2, AR033:2, AR267:2, AR247:2, AR104:2, AR292:2, AR284:2, AR295:2, AR285:1, AR096:1, AR313:1, AR226:1, AR177:1, AR290:1, AR218:1, AR259:1, AR231:1, AR281:1, AR039:1, AR291:1, AR237:1, AR293:1, AR229:1, AR205:1, AR296:1 H0069:1, S0474:1 and L0766:1.
301	HTDAA78	566861	311	151 - 213	714	AR240:12, AR219:12, AR039:10, AR316:10, AR218:9, AR096:8, AR283:8, AR282:8, AR313:7, AR055:7, AR089:6, AR104:6, AR300:6, AR299:6, AR277:5, AR060:4, AR185:3 H0477:1
302	HTECB02	806305	312	196 - 366	715	AR283:34, AR104:20, AR219:12, AR240:12, AR089:12, AR218:12, AR282:11, AR299:10, AR055:10, AR039:9, AR060:9, AR096:8, AR316:8, AR185:7, AR277:6, AR300:6, AR313:6 S0358:3, H0253:3, T0010:3, L0806:3, L0747:3, L0749:3, H0265:2, H0663:2, H0036:2, H0618:2, L0764:2, L5623:2, L0666:2, H0521:2, L0759:2, L0591:2, L0604:2, H0556:1, S0114:1, L0443:1, S0408:1, H0619:1, S0222:1, H0559:1, T0039:1, S0280:1, L0021:1, H0706:1, H0196:1, H0052:1, H0545:1, H0009:1, H0172:1, H0123:1, H0024:1, H0014:1, S0388:1, H0239:1, H0428:1, H0181:1, H0708:1, H0591:1, H0038:1, S0002:1, L0796:1, L3905:1, L0761:1, L0646:1, L0766:1, L0381:1, L0803:1, L0774:1, L0775:1, L0807:1, L0517:1, L0783:1, L0384:1, L0809:1, L0545:1, L5622:1, L0788:1, L0664:1, L0447:1, H0658:1, S0027:1, L0743:1, L0744:1, L0751:1, L0754:1, L0745:1, L0746:1, L0750:1, L0752:1, L0755:1, L0758:1, S0434:1, H0665:1 and H0542:1.
303	HTEDF18	635528	313	325 - 342	716	AR055:6, AR060:5, AR282:5, AR299:4, AR104:4, AR240:4, AR277:3, AR300:3, AR089:3, AR283:2, AR185:2, AR039:2, AR316:2, AR218:2, AR096:2, AR313:1, AR219:1 L0758:6, L0794:5, L0779:4, H0038:2, L0662:1, L0805:1, L0790:1 and L0791:1.
304	HTEDJ28	762845	314	287 - 424	717	AR219:24, AR218:21, AR089:19, AR055:18, AR313:16, AR299:15, AR096:13, AR316:13, AR104:13, AR060:11, AR185:11, AR283:10, AR039:9, AR277:9, AR282:9, AR300:8, AR240:7 L0747:9, L0439:8, L0809:6, L0766:5, L0750:5, L0758:5, L0740:4, L0752:4, L0731:4, L0662:3, H0547:3, L0779:3, L0777:3, L0757:3, H0375:2, L0646:2, L0774:2, L0783:2, H0144:2, L0759:2, S0442:1, H0333:1, T0060:1, H0327:1, H0399:1, L0483:1, H0038:1, L0564:1, S0382:1, H0538:1, H0743:1, L0763:1, L0638:1, L0765:1, L0771:1, L0649:1, L0522:1, L0775:1, L0655:1, L0659:1, L0792:1, L0663:1, L0438:1, H0648:1, L0756:1, L0753:1, L0596:1, L0590:1, L0592:1, L0608:1, H0423:1 and S0460:1.
305	HTEEW69	764835	315	182 - 1153	718	AR104:36, AR283:28, AR219:27, AR218:27, AR316:21, AR277:20, AR089:20, AR055:19, AR096:18, AR313:18, AR240:18, AR282:18, AR185:16, AR299:16, AR060:15, AR039:14, AR300:12 H0038:8, H0616:4, L0779:3, L0758:3, L0753:2, L0032:1, T0006:1, H0040:1, L0768:1 and H0547:1.
306	HTEGS07	827700	316	493 - 606	719	AR283:22, AR277:9, AR055:8, AR218:8, AR219:7, AR060:6, AR104:6, AR300:6, AR282:5, AR240:5, AR039:4, AR089:4, AR316:4, AR185:4, AR299:4, AR096:4, AR313:3 L0804:2, L0747:2, L0485:2, L0604:2, L0623:1, H0708:1, S0366:1, H0038:1, L0794:1, L0775:1 and L0779:1.
307	HTEGS11	862066	317	173 - 196	720	AR219:12, AR055:9, AR218:9, AR185:9, AR060:8, AR300:7, AR240:6, AR104:6, AR089:6, AR282:6, AR299:6, AR096:5, AR039:5, AR316:4, AR313:3, AR283:3, AR277:3

308	HTEHU59	840385	318	170 - 274	721	L0748:8, L0598:4, L0747:4, L0770:3, L0750:3, L0756:3, H0645:2, H0619:2, L0794:2, L0666:2, L0439:2, L0749:2, L0777:2, L0731:2, H0170:1, S0040:1, H0713:1, H0486:1, H0196:1, L0471:1, H0038:1, L0769:1, L0637:1, L0761:1, L0772:1, L0766:1, L0775:1, L0367:1, L0789:1, L0793:1, H0144:1, H0547:1, L0758:1 and L0581:1.
309	HTEKM46	862069	319	171 - 287	722	AR313:11, AR218:10, AR219:9, AR039:7, AR316:6, AR096:6, AR104:6, AR277:5, AR299:5, AR055:5, AR282:4, AR089:4, AR283:3, AR300:3, AR060:3, AR240:3, AR185:3, S0422:6, H0038:4, L0758:4, L0754:3, S0360:2, L0598:2, L0766:2, L0748:2, L0747:2, L0756:2, H0583:1, H0341:1, S0418:1, L0005:1, H0741:1, H0437:1, H0369:1, H0581:1, H0194:1, S0050:1, H0271:1, H0428:1, T0006:1, H0068:1, H0412:1, H0056:1, H0494:1, S0426:1, L0772:1, L0646:1, L0662:1, L0803:1, L0806:1, L0776:1, L0655:1, L0789:1, L0792:1, H0144:1, S0374:1, H0670:1, H0627:1, S0026:1 and S0192:1.
310	HTEMQ17	840387	320	446 - 484	723	AR282:6, AR055:6, AR060:5, AR218:4, AR283:4, AR300:3, AR299:3, AR316:3, AR039:3, AR185:3, AR104:2, AR089:2, AR219:2, AR313:2, AR096:2, AR240:1, L0748:6, L0766:4, H0038:3, H0616:3, H0056:2, H0529:2, H0519:2, H0624:1, H0662:1, S0418:1, S0360:1, H0749:1, H0013:1, H0581:1, S0388:1, H0266:1, H0591:1, H0087:1, H0413:1, H0561:1, S0438:1, S0422:1, L0520:1, L0769:1, L0794:1, L0775:1, L0666:1, L0663:1, H0547:1, S0152:1, L0740:1, L0777:1, L0753:1, L0758:1, L0608:1 and H0542:1.
311	HTGBK95	834490	321	271 - 321	724	AR277:83, AR313:74, AR219:72, AR283:69, AR316:57, AR039:49, AR218:49, AR089:48, AR299:46, AR282:42, AR104:42, AR096:42, AR185:40, AR240:39, AR055:37, AR300:32, AR060:32, L0777:5, S0444:3, L0766:3, L0803:3, L0439:3, S0360:2, L0598:2, L0666:2, L0748:2, T0049:1, S0134:1, S0116:1, S0408:1, L0717:1, H0586:1, H0486:1, H0575:1, H0510:1, H0553:1, H0560:1, S0422:1, L0763:1, L0769:1, L0521:1, L0767:1, L0768:1, L0775:1, L0663:1, S0374:1, L0438:1, H0520:1, H0682:1, S0328:1, S0406:1, L0740:1, S0192:1 and H0543:1.
312	HTLAP64	603913	322	173 - 235	725	AR313:19, AR039:14, AR299:12, AR055:10, AR185:9, AR316:8, AR104:7, AR096:7, AR300:6, AR089:6, AR060:5, AR218:5, AR282:4, AR283:4, AR277:4, AR219:3, AR240:3, L0803:7, L0756:6, S0422:4, L0794:4, L0809:4, L0754:4, L0758:3, S0003:2, H0615:2, L0764:2, L0375:2, L0659:2, L0783:2, L0665:2, L0748:2, L0731:2, L0759:2, L3643:1, H0686:1, S0624:1, L0002:1, H0662:1, L0005:1, L3649:1, H0734:1, H0749:1, H0441:1, H0574:1, L3653:1, H0575:1, H0253:1, S0474:1, H0052:1, H0569:1, H0081:1, L0471:1, H0266:1, H0687:1, H0622:1, L0483:1, H0628:1, H0606:1, H0135:1, H0591:1, H0059:1, L0763:1, L0637:1, L3904:1, L0772:1, L0643:1, L0768:1, L0364:1, L0649:1, L0774:1, L4558:1, L0368:1, L4501:1, L0663:1, L0664:1, L2655:1, H0144:1, L0352:1, H0519:1, H0593:1, S0126:1, H0660:1, H0666:1, H0696:1, S0406:1, S0028:1,

						L0740:1, L0745:1, L0747:1, L0750:1, L0779:1, S0436:1, L0587:1, L0597:1, L0591:1, S0026:1, L0097:1 and S0242:1.
313	HTLBT80	840045	323	912 - 1301	726	AR251:22, AR273:18, AR053:18, AR309:16, AR310:16, AR183:15, AR313:15, AR274:15, AR263:15, AR247:15, AR312:14, AR314:14, AR266:14, AR265:14, AR219:14, AR175:13, AR218:13, AR285:12, AR280:12, AR182:12, AR268:12, AR293:12, AR213:12, AR052:12, AR292:11, AR290:11, AR286:11, AR267:11, AR277:11, AR289:11, AR315:11, AR296:11, AR256:11, AR295:11, AR177:10, AR291:10, AR269:10, AR271:10, AR284:10, AR096:9, AR243:9, AR270:9, AR299:9, AR283:9, AR249:9, AR300:9, AR033:9, AR253:9, AR238:9, AR184:8, AR179:8, AR248:8, AR231:8, AR298:8, AR234:8, AR061:8, AR226:8, AR282:8, AR232:8, AR229:8, AR316:8, AR258:8, AR259:7, AR233:7, AR240:7, AR186:7, AR294:7, AR185:7, AR198:7, AR237:7, AR275:6, AR281:6, AR039:6, AR192:6, AR227:6, AR089:6, AR104:6, AR246:6, AR055:6, AR244:6, AR202:5, AR204:5, AR060:5, AR206:4, AR205:4, AR241:4, AR194:1 L0659:6, H0556:4, H0521:4, L0439:4, L0745:4, L0759:4, H0657:3, S0360:3, L0761:3, L0662:3, L0766:3, L0809:3, H0549:2, H0392:2, H0253:2, H0581:2, H0620:2, H0051:2, H0551:2, H0494:2, L0770:2, L0794:2, L0649:2, L0665:2, H0520:2, S0032:2, L0741:2, L0743:2, L0748:2, L0747:2, L0779:2, L0758:2, L0605:2, H0650:1, H0484:1, H0254:1, H0402:1, S0358:1, H0580:1, H0741:1, S0007:1, S0132:1, S0476:1, H0393:1, H0369:1, H0550:1, H0409:1, H0256:1, H0250:1, H0042:1, H0036:1, H0318:1, S0049:1, H0050:1, H0014:1, H0375:1, S6028:1, H0266:1, H0292:1, H0428:1, H0622:1, H0031:1, H0617:1, L0456:1, H0135:1, H0040:1, H0379:1, H0264:1, H0056:1, H0623:1, H0100:1, H0633:1, S0002:1, H0529:1, L0762:1, L5575:1, L0772:1, L0646:1, L0771:1, L0773:1, L0767:1, L0768:1, L0803:1, L0805:1, L0653:1, L5622:1, L4501:1, L0666:1, H0689:1, H0690:1, H0682:1, H0670:1, H0522:1, S0044:1, H0436:1, S0027:1, L0754:1, L0749:1, L0753:1, L0731:1, S0436:1, H0653:1, S0192:1, H0542:1, H0543:1, H0423:1 and S0424:1.
314	HTLDA84	686397	324	225 - 266	727	AR313:7, AR039:5, AR277:3, AR185:3, AR299:3, AR096:2, AR300:2, AR089:2, AR316:2, AR283:2, AR219:2, AR060:1, AR240:1, AR104:1, AR055:1 H0253:1
315	HTLDN29	790195	325	175 - 276	728	AR096:15, AR219:10, AR218:10, AR316:9, AR240:9, AR039:8, AR313:8, AR300:6, AR282:6, AR299:6, AR104:6, AR060:5, AR089:5, AR055:5, AR185:5, AR277:5, AR283:3 L0766:7, L0731:4, H0529:3, L0769:3, L0806:3, L0776:3, H0618:2, L0770:2, L0800:2, L0771:2, L0774:2, L0517:2, L0665:2, S0406:2, L0751:2, L0750:2, L0758:2, L0589:2, S0424:2, L0600:2, H0713:1, H0717:1, H0341:1, S0358:1, H0734:1, H0747:1, L0717:1, H0431:1, H0497:1, H0333:1, T0039:1, H0013:1, H0635:1, H0156:1, H0599:1, H0004:1, H0253:1, H0052:1, H0023:1, T0010:1, H0083:1, H0629:1, H0266:1, H0271:1, H0687:1, H0688:1, H0038:1, H0634:1, H0058:1, H0100:1, H0494:1, H0561:1, H0641:1, L0372:1, L0646:1, L0643:1, L0794:1, L0803:1, L0775:1, L0805:1, L0807:1, L0657:1, L0782:1, L5622:1, L0791:1, L0792:1, L0663:1, H0547:1, H0660:1, H0539:1, H0521:1, H0774:1, H0134:1, S0390:1, L0439:1, L0754:1, L0747:1, L0779:1, L0755:1, L0757:1, H0445:1, S0434:1, L0596:1, L0592:1, L0599:1, L0593:1 and H0543:1.



316	HTLDU78	637702	326	219 - 245	729	L0758:3, H0253:1 and L0779:1.
317	HTLEC82	811992	327	530 - 640	730	AR283:60, AR219:60, AR277:57, AR218:43, AR096:41, AR104:40, AR316:40, AR240:39, AR313:37, AR089:36, AR185:35, AR299:31, AR039:29, AR282:28, AR055:27, AR060:21, AR300:20 L0766:29, H0618:13, H0253:13, L0758:10, L0754:9, L0731:8, L0750:7, L0756:6, L0761:5, L0744:5, L0748:5, L0747:5, L0759:5, L0763:4, L0769:4, L0662:4, L0741:4, H0024:3, H0641:3, L0770:3, L0800:3, L0775:3, H0521:3, L0755:3, S0418:2, S0046:2, S0476:2, H0250:2, H0052:2, H0620:2, H0266:2, H0271:2, H0188:2, L0783:2, L0809:2, L0792:2, H0689:2, L0751:2, L0757:2, L0603:2, H0265:1, H0556:1, H0713:1, H0583:1, H0650:1, H0662:1, L0005:1, S0442:1, S0444:1, H0580:1, H0730:1, H0619:1, H0351:1, H0549:1, H0550:1, S0222:1, H0431:1, H0455:1, H0331:1, H0427:1, S0280:1, H0122:1, H0318:1, S0049:1, H0546:1, H0545:1, H0086:1, H0009:1, H0011:1, H0023:1, S0051:1, T0010:1, H0179:1, H0028:1, H0615:1, H0688:1, H0428:1, H0039:1, T0023:1, H0030:1, H0553:1, H0181:1, H0606:1, H0135:1, H0038:1, H0634:1, H0063:1, H0264:1, H0272:1, H0056:1, T0041:1, T0042:1, H0494:1, H0560:1, H0647:1, H0281:1, S0002:1, L4497:1, L0637:1, L0643:1, L0644:1, L0764:1, L0773:1, L0767:1, L0768:1, L0794:1, L0650:1, L0651:1, L0784:1, L0378:1, L0644:1, L0764:1, L0773:1, L0767:1, L0768:1, L0794:1, L0650:1, L0651:1, L0784:1, L0378:1, L0776:1, L0807:1, L0528:1, L0790:1, L0793:1, L0666:1, S0374:1, H0693:1, H0547:1, H0593:1, H0672:1, S0152:1, H0555:1, S0027:1, L0742:1, L0439:1, L0780:1, S0436:1, L0596:1, H0543:1 and H0352:1.
318	HTLEM16	779133	328	1220 - 1429	731	AR104:96, AR219:74, AR277:67, AR283:59, AR218:52, AR185:51, AR089:49, AR316:46, AR096:44, AR240:44, AR313:42, AR055:40, AR299:37, AR282:37, AR060:33, AR039:33, AR300:24 L0439:31, L0741:24, H0056:13, L0748:12, H0052:9, H0521:9, L0776:8, L0744:8, L0438:7, L0754:7, S0474:6, L0766:6, L0742:6, L0731:6, L0750:5, S0278:4, L5566:4, L0665:4, H0522:4, H0556:3, H0716:3, H0657:3, S0358:3, H0580:3, H0599:3, S0049:3, H0009:3, H0553:3, H0641:3, S0142:3, L0764:3, L0659:3, L0666:3, S0126:3, L0751:3, H0717:2, H0656:2, S0029:2, S0420:2, S0360:2, S0007:2, H0497:2, H0486:2, H0618:2, H0253:2, H0581:2, H0046:2, S0388:2, T0010:2, H0039:2, H0424:2, L0456:2, S0036:2, H0135:2, H0551:2, H0623:2, H0494:2, S0002:2, L0770:2, L0796:2, L5575:2, L5565:2, L0761:2, L0662:2, L0650:2, L0383:2, L0663:2, H0682:2, L0758:2, S0434:2, L0596:2, L0581:2, S0242:2, S0114:1, H0583:1, L0422:1, S0116:1, H0662:1, H0305:1, S0418:1, L0005:1, S0444:1, S0046:1, S0476:1, H0645:1, H0437:1, H0261:1, H0392:1, H0600:1, H0586:1, H0574:1, L0623:1, H0013:1, H0250:1, H0427:1, H0002:1, H0575:1, T0082:1, H0590:1, S0010:1, H0390:1, T0048:1, H0318:1, H0421:1, H0251:1, H0232:1, H0546:1, H0150:1, H0041:1, H0178:1, H0569:1, H0620:1, H0051:1, S0051:1, H0510:1, H0416:1, H0188:1, S0312:1, S0314:1, H0622:1, H0213:1, H0031:1, L0143:1, H0032:1, L0455:1, S0366:1, H0038:1, H0087:1, H0264:1, H0268:1, H0022:1, H0560:1, H0625:1, H0561:1, S0438:1, H0509:1, H0633:1, H0649:1, S0144:1, S0208:1, H0529:1, L0769:1, L0637:1, L0667:1, L5568:1, L0774:1, L0375:1, L0805:1, L0653:1, L0654:1, L0661:1, L0807:1, L0527:1, L0382:1, L0809:1, L0793:1, S0006:1, S0428:1, S0053:1, S0310:1, L0352:1, H0547:1, H0684:1, H0670:1, H0660:1, S0152:1, H0696:1, S0406:1, H0555:1, H0436:1, S0014:1, L0743:1, L0745:1, L0747:1, L0749:1, L0756:1, L0753:1, L0755:1, H0445:1, S0436:1,

319	HTLEV48	723799	329	205 - 825	732	L0485:1, H0667:1, H0216:1, H0543:1, H0422:1 and H0008:1. S0366:4, L0623:1 and H0253:1.
	HTLEV48	566786	392	91 - 120	795	
320	HTLFI73	846063	330	340 - 411	733	AR316:6, AR218:6, AR055:6, AR060:5, AR277:5, AR300:5, AR240:4, AR283:4, AR104:4, AR185:4, AR299:3, AR039:3, AR282:3, AR219:3, AR089:3, AR096:2, AR313:2 H0253:2, H0305:1, T0109:1 and H0618:1.
321	HTNAM63	566880	331	193 - 285	734	L0439:6, T0067:1 and L0438:1.
322	HTNBK13	831967	332	534 - 599	735	L0779:5, L0731:4, L0593:4, H0046:3, L0776:3, L0666:3, H0031:2, L0772:2, L0774:2, L0805:2, H0670:2, L0439:2, L0754:2, L0777:2, L0758:2, L0590:2, T0002:1, L0717:1, H0632:1, L0622:1, T0082:1, H0581:1, H0263:1, T0115:1, H0597:1, L0471:1, H0012:1, H0620:1, H0163:1, T0067:1, L0770:1, L0637:1, L0388:1, L0657:1, L0382:1, L0664:1, S0126:1, H0660:1, S0378:1, H0521:1, L0747:1, L0750:1, L0756:1, L0752:1, L0755:1, L0759:1, S0031:1, L0599:1 and L0603:1.
323	HTOAI50	638623	333	61 - 144	736	AR313:10, AR219:9, AR218:8, AR039:8, AR104:7, AR299:6, AR185:6, AR089:6, AR096:5, AR282:4, AR316:4, AR277:4, AR300:4, AR055:4, AR060:4, AR240:2, AR283:2 S0442:1, L3388:1, H0264:1 and L0766:1.
324	HTOAMI1	664508	334	89 - 193	737	AR313:30, AR039:27, AR185:18, AR299:16, AR300:13, AR277:13, AR096:13, AR089:12, AR218:11, AR219:11, AR316:9, AR240:9, AR104:8, AR060:7, AR055:6, AR282:6, AR283:3 S0010:1 and H0264:1.
325	HTODH57	823126	335	228 - 443	738	AR055:5, AR060:5, AR185:4, AR283:3, AR218:3, AR300:3, AR104:3, AR299:3, AR089:2, AR039:2, AR240:2, AR316:2, AR282:2, AR096:2, AR313:2, AR219:1, AR277:1 H0264:1
326	HTODH83	580884	336	103 - 201	739	AR055:4, AR060:4, AR283:2, AR039:2, AR104:2, AR219:2, AR299:2, AR185:2, AR282:1, AR089:1, AR316:1, AR240:1, AR096:1, AR277:1 H0264:1
327	HTODN35	570901	337	67 - 111	740	AR104:20, AR185:11, AR055:11, AR060:10, AR089:10, AR299:10, AR240:9, AR277:8, AR282:8, AR313:7, AR300:7, AR316:7, AR283:5, AR096:5, AR218:4, AR219:4, AR039:3 H0264:1
328	HTOEV16	853616	338	201 - 557	741	AR104:8, AR218:6, AR055:6, AR060:5, AR240:5, AR185:4, AR316:4, AR282:4, AR299:4, AR300:4, AR283:4, AR039:4, AR277:3, AR096:3, AR219:3, AR313:3, AR089:3 H0506:66, H0555:28, S0354:20, H0264:18, H0087:17, H0581:16, S0116:15, H0486:13, H0040:12, H0063:12, S0358:10, H0597:8, H0039:7, H0488:6, L0751:5, H0421:4, L0744:4, H0255:3, S0356:3, S0408:3, H0156:3, S0182:3, S0432:3, H0427:2, H0108:2, H0575:2, T0023:2, S0382:2, H0538:2, L0770:2, L0769:2, L0662:2, L0439:2, L0592:2, S0462:2, H0624:1, S0430:1, S0212:1, H0254:1, S0376:1, H0489:1, H0393:1, H0550:1, H0331:1, H0025:1, H0042:1, H0004:1, T0071:1, H0596:1, H0231:1, H0545:1, H0086:1, H0355:1, H0510:1, H0031:1, H0598:1, H0090:1, H0591:1, H0561:1, S0370:1, S0464:1, L0372:1, L0508:1, S0374:1, H0547:1, H0689:1, H0215:1, S0392:1, L0747:1,

329	HTOGR38	824639	339	314 - 442	742	L0731:1, L0758:1, H0445:1, H0595:1, S0456:1, S0446:1 and L0600:1. AR316:149, AR104:15, AR055:14, AR089:14, AR218:13, AR240:13, AR299:12, AR185:12, AR313:11, AR096:11, AR060:11, AR282:10, AR219:10, AR277:9, AR283:9, AR300:8, AR039:7 L0777:3, L0748:2, H0264:1, L0794:1 and L0740:1.
330	HTOHQ05	853621	340	198 - 362	743	AR282:39, AR300:26, AR299:25, AR316:16, AR096:15, AR240:10, AR313:6, AR252:4, AR039:4, AR055:3, AR235:3, AR089:3, AR192:3, AR201:3, AR169:3, AR170:2, AR215:2, AR217:2, AR172:2, AR165:2, AR171:2, AR205:2, AR180:2, AR272:2, AR219:2, AR261:1, AR181:1, AR195:1, AR216:1, AR287:1, AR247:1, AR183:1, AR270:1, AR163:1, AR296:1 H0264:1
331	HTPDU17	840596	341	52 - 153	744	AR039:5, AR277:4, AR300:4, AR282:3, AR316:3, AR096:3, AR218:3, AR299:3, AR060:2, AR055:2, AR283:2, AR185:2, AR104:2, AR313:2, AR089:1, AR240:1 H0677:19, L0759:6, L0748:5, H0040:4, L0438:3, L0754:3, L0750:3, L0777:3, H0255:2, H0617:2, H0038:2, H0529:2, L0769:2, L0761:2, L0662:2, L0666:2, S0406:2, L0749:2, L0758:2, L0595:2, H0265:1, H0556:1, H0717:1, S0134:1, H0650:1, H0657:1, S0358:1, S0444:1, S0410:1, S0045:1, H0411:1, H0392:1, L0468:1, H0587:1, H0013:1, H0069:1, H0635:1, H0575:1, H0618:1, H0581:1, H0564:1, H0569:1, S0628:1, H0266:1, H0252:1, H0615:1, H0039:1, H0031:1, H0634:1, H0100:1, H0494:1, H0334:1, H0561:1, S0150:1, S0422:1, L0667:1, L0646:1, L0800:1, L0771:1, L0661:1, L0809:1, L0790:1, L0792:1, L0663:1, L0665:1, S0374:1, H0547:1, H0519:1, H0593:1, H0672:1, H0518:1, H0521:1, H0555:1, H0436:1, L0439:1, L0779:1, L0731:1 and L0757:1.
332	HTSFJ32	637720	342	93 - 149	745	AR104:9, AR039:7, AR277:5, AR282:4, AR313:4, AR299:4, AR240:3, AR089:3, AR283:3, AR300:3, AR096:3, AR185:3, AR055:2, AR316:2, AR219:2, AR218:2, AR060:2 H0556:1, S0114:1, H0087:1, H0538:1, H0695:1 and L0774:1.
333	HTTDN24	766485	343	1024 - 1728	746	AR218:21, AR219:20, AR089:15, AR300:14, AR316:14, AR185:13, AR313:13, AR277:13, AR282:13, AR039:12, AR299:11, AR096:11, AR055:10, AR104:8, AR240:7, AR060:7, AR283:6
334	HTTEE41	840950	344	1171 - 1197	747	AR219:84, AR218:59, AR316:43, AR313:32, AR104:24, AR089:24, AR185:24, AR039:23, AR096:23, AR299:21, AR055:20, AR060:17, AR282:14, AR300:14, AR283:11, AR240:11, AR277:10 H0040:17, H0251:14, L0758:10, L0748:8, L0731:8, H0494:7, L0666:7, H0144:7, H0659:7, L0747:7, L0749:7, L0757:7, H0038:6, H0529:6, L0770:6, L0662:6, L0659:6, H0013:5, H0318:5, H0616:5, S0440:5, L0775:5, L0776:5, H0519:5, L0588:5, L0592:5, H0341:4, S0360:4, H0412:4, L0663:4, H0547:4, L0754:4, L0595:4, H0542:4, H0543:4, H0423:4, H0171:3, H0657:3, H0656:3, S0045:3, L3388:3, H0581:3, S0049:3, T0110:3, H0046:3, H0090:3, H0591:3, H0551:3, H0100:3, H0022:3, H0625:3, H0633:3, S0422:3, L0375:3, L0664:3, H0682:3, S0406:3, L0740:3, H0556:2, H0241:2, H0638:2, S0418:2, L0005:2, S0442:2, S0376:2, H0722:2, H0393:2, L0717:2, S0222:2, H0574:2, H0486:2, T0040:2, L0471:2, S0051:2, S0003:2, H0252:2, L0483:2, T0006:2, H0031:2, H0032:2, H0124:2, H0634:2, H0264:2, T0042:2, S0150:2, H0646:2, L0763:2, L0637:2, L0646:2, L0374:2, L0764:2, L0768:2, L0653:2, L0665:2, H0593:2, H0435:2, H0658:2, H0539:2, S0152:2, L3832:2,

335	HTXBD09	839429	345	350 - 388	748	<p>H0521:2, S0114:2, S0027:2, S0028:2, L0439:2, L0750:2, L0777:2, S0436:2, L0596:2, L0608:2, L0604:2, L0594:2, L0362:2, S0026:2, H0667:2, S0452:2, H0506:2, L0411:1, H0624:1, H0170:1, H0395:1, H0265:1, T0002:1, H0220:1, H0140:1, H0159:1, H0686:1, H0583:1, H0650:1, S0212:1, H0484:1, H0664:1, L0481:1, S0356:1, S0354:1, S0358:1, S0444:1, S0408:1, L3649:1, H0580:1, H0747:1, H0437:1, H0431:1, T0104:1, H0600:1, H0592:1, H0586:1, L3817:1, H0642:1, H0632:1, L2482:1, T0114:1, H0244:1, H0250:1, H0069:1, H0156:1, L0021:1, H0599:1, H0036:1, S0346:1, H0596:1, H0544:1, H0009:1, N0006:1, L0157:1, H0569:1, H0123:1, H0242:1, H0024:1, H0083:1, H0375:1, H0328:1, H0615:1, H0428:1, H0039:1, H0622:1, H0213:1, H0553:1, L0142:1, H0628:1, H0674:1, H0388:1, L0456:1, H0708:1, H0068:1, H0598:1, S0036:1, H0135:1, H0087:1, H0380:1, H0413:1, H0056:1, L0351:1, T0041:1, H0334:1, H0561:1, H0366:1, S0448:1, S0294:1, H0130:1, H0641:1, H0649:1, S0208:1, S0002:1, S0426:1, L0520:1, L0631:1, L0769:1, L0638:1, L5565:1, L0667:1, L0772:1, L0372:1, L0641:1, L0626:1, L0794:1, L0766:1, L0381:1, L0650:1, L0651:1, L0806:1, L0655:1, L0807:1, L0657:1, L0636:1, L0518:1, L0782:1, L0382:1, L0809:1, L3391:1, L2263:1, L2259:1, L2262:1, L0565:1, H0693:1, L3827:1, H0520:1, S0126:1, H0689:1, H0670:1, H0660:1, H0666:1, H0648:1, L0602:1, H0710:1, H0518:1, S0176:1, H0134:1, H0555:1, H0436:1, H0478:1, H0631:1, L0779:1, L0752:1, S0434:1, L0605:1, L0591:1, L0599:1, H0665:1, S0196:1, L2368:1, H0008:1 and H0352:1.</p>
335	HTXBD09	839429	345	350 - 388	748	<p>AR219:10, AR218:9, AR313:8, AR240:7, AR277:7, AR316:7, AR055:6, AR282:6, AR096:6, AR039:6, AR089:6, AR060:6, AR185:5, AR299:5, AR300:5, AR104:5, AR283:4  L0439:9, L0751:7, L0662:3, L0766:3, L0665:3, L0757:3, S0007:2, H0050:2, L0770:2, L0769:2, L0764:2, L0774:2, L0776:2, L0663:2, S0053:2, L0750:2, L0756:2, L0731:2, L0601:2, H0265:1, S0116:1, H0661:1, L0717:1, L0622:1, H0486:1, H0545:1, H0150:1, H0553:1, L0055:1, H0038:1, H0634:1, H0413:1, S0438:1, S0144:1, L0520:1, L0762:1, L0763:1, L0363:1, L0654:1, L0783:1, L0809:1, L0664:1, H0435:1, H0753:1, H0555:1, L0740:1, L0747:1, L0749:1, L0777:1, L0758:1, L0597:1 and L0595:1.</p>
336	HTXDB22	853407	346	229 - 297	749	<p>AR218:18, AR219:16, AR096:14, AR313:12, AR316:11, AR039:10, AR299:10, AR104:10, AR089:9, AR055:9, AR060:8, AR185:8, AR300:7, AR240:6, AR277:6, AR282:5, AR283:4  H0271:16, S0422:15, L0777:11, H0179:10, L0766:9, S0360:8, H0521:7, L0752:7, H0584:6, H0457:6, H0423:6, S0356:5, S0474:5, L0770:5, L0776:5, H0659:5, L0748:5, L0779:5, H0749:4, H0581:4, H0617:4, L0521:4, L0655:4, L0663:4, S0328:4, L0754:4, L0749:4, L0756:4, S0242:4, H0265:3, H0585:3, S0418:3, S0444:3, H0747:3, H0674:3, S0426:3, L0662:3, L0438:3, S0126:3, L0439:3, L0731:3, H0543:3, H0422:3, H0624:2, H0556:2, H0657:2, H0255:2, S0420:2, S0442:2, S0408:2, H0455:2, H0497:2, L3816:2, H0486:2, H0318:2, H0545:2, H0150:2, S0003:2, S0214:2, H0087:2, H0100:2, S0440:2, S0144:2, S0002:2, L0598:2, H0529:2, L0769:2, L0638:2, L0768:2, L0527:2, L0659:2, L0518:2, L0666:2, L0665:2, S0052:2, S0216:2, H0522:2, L0747:2, L0755:2, S0026:2, S0194:2, H0167:1, S0470:1, S0040:1, H0713:1, H0294:1, T0049:1, S0134:1, S0218:1, H0656:1, S0116:1, H0341:1, S0180:1, L3659:1, H0638:1, S0354:1, S0376:1, L3649:1, H0580:1, H0729:1,</p>

						H0742:1, H0730:1, S0476:1, L3388:1, H0351:1, S6014:1, H0574:1, L0586:1, H0013:1, H0250:1, H0156:1, L0021:1, H0309:1, H0263:1, H0231:1, L0738:1, H0544:1, H0046:1, L0471:1, H0057:1, H0015:1, H0373:1, H0083:1, H0375:1, H0719:1, H0687:1, H0290:1, S0250:1, T0006:1, H0030:1, H0553:1, H0032:1, H0673:1, H0169:1, L0455:1, H0316:1, H0090:1, H0591:1, H0040:1, H0634:1, H0059:1, H0102:1, T0042:1, H0494:1, S0438:1, H0132:1, S0142:1, UNKWN:1, L0520:1, L0640:1, L0763:1, L0637:1, L5565:1, L0761:1, L0373:1, L0372:1, L0648:1, L0767:1, L0794:1, L0803:1, L0774:1, L0775:1, L0378:1, L0806:1, L0805:1, L0657:1, L0635:1, L0526:1, L0809:1, L0532:1, L0664:1, S0428:1, S0053:1, L3827:1, H0520:1, H0547:1, H0690:1, H0682:1, H0672:1, S0378:1, H0696:1, H0694:1, H0134:1, S0406:1, H0436:1, H0576:1, H0479:1, H0627:1, H0631:1, L0740:1, L0745:1, L0757:1, L0758:1, S0031:1, H0343:1, S0436:1, L0605:1, L0592:1, L0485:1, S0011:1, H0136:1, S0196:1, H0542:1, L0698:1, S0460:1, H0506:1, L3630:1 and H0352:1.
337	HTXDC38	801935	347	359 - 415	750	AR170:25, AR168:18, AR104:14, AR253:13, AR243:12, AR171:12, AR169:11, AR215:11, AR254:11, AR239:10, AR060:10, AR250:10, AR225:10, AR055:10, AR204:9, AR238:9, AR161:9, AR162:9, AR061:9, AR172:9, AR242:9, AR163:9, AR214:9, AR246:9, AR185:8, AR231:8, AR205:8, AR165:8, AR309:8, AR282:8, AR240:8, AR164:8, AR217:8, AR166:7, AR216:7, AR193:7, AR275:7, AR201:7, AR316:7, AR237:7, AR210:7, AR227:7, AR235:6, AR180:6, AR229:6, AR300:6, AR226:6, AR198:6, AR233:6, AR096:6, AR224:6, AR089:6, AR197:6, AR195:6, AR247:6, AR228:6, AR296:6, AR192:6, AR245:6, AR178:6, AR269:6, AR234:5, AR266:5, AR299:5, AR039:5, AR230:5, AR218:5, AR232:5, AR271:5, AR183:5, AR181:5, AR312:5, AR272:5, AR173:5, AR176:5, AR221:5, AR177:5, AR270:5, AR268:5, AR223:5, AR053:5, AR293:5, AR182:4, AR313:4, AR212:4, AR219:4, AR291:4, AR199:4, AR289:4, AR288:4, AR274:4, AR308:4, AR264:4, AR290:4, AR257:4, AR277:4, AR267:4, AR261:4, AR311:4, AR174:4, AR283:4, AR189:4, AR255:3, AR287:3, AR294:3, AR203:3, AR297:3, AR285:3, AR207:3, AR211:3, AR295:3, AR175:3, AR188:3, AR262:3, AR179:3, AR222:3, AR213:3, AR200:3, AR190:3, AR286:3, AR033:2, AR196:2, AR191:2, AR258:2, AR236:2, AR260:2, AR256:1 S0406:9, L0755:6, L0769:4, H0009:3, H0012:3, L0783:3, L0749:3, L0750:3, L0779:3, L0731:3, S0442:2, S0376:2, S0410:2, S0051:2, H0606:2, H0100:2, S0440:2, L0638:2, L0665:2, S0028:2, L0751:2, L0747:2, L0756:2, L0758:2, L0603:2, H0265:1, H0294:1, H0341:1, S0212:1, L3659:1, S0444:1, S0408:1, H0742:1, S0045:1, H0393:1, H0549:1, S0222:1, H0586:1, H0331:1, L0623:1, T0060:1, H0581:1, S0049:1, H0309:1, H0545:1, L0471:1, H0620:1, H0024:1, H0266:1, H0428:1, H0213:1, L0456:1, S0366:1, S0036:1, H0040:1, S0142:1, L0763:1, L0371:1, L0772:1, L0372:1, L0646:1, L0764:1, L0773:1, L0766:1, L0774:1, L0775:1, L0776:1, L0809:1, L0519:1, L2263:1, H0520:1, H0519:1, S0126:1, H0660:1, H0710:1, S0350:1, H0436:1, S3012:1, L0752:1, L0757:1, S0436:1, L0592:1, S0276:1 and H0422:1.
338	HTXDC77	844258	348	65 - 520	751	AR096:676, AR240:444, AR039:281, AR316:255, AR219:252, AR218:219, AR089:164, AR313:162, AR299:150, AR300:141, AR185:127, AR282:113, AR055:113, AR060:110, AR283:94, AR104:88, AR277:62 S0344:14, S0212:4, S0372:4, H0555:4, H0581:3, S0376:2, H0597:2, H0265:1, S0360:1, S0222:1,

339	HTXDD61	853408	349	49 - 447	752	H0046:1, H0264:1, S0370:1, S0144:1, S0142:1, H0521:1 and S0027:1. AR277:9, AR283:5, AR282:3, AR055:3, AR104:3, AR300:3, AR313:2, AR316:2, AR218:2, AR240:2, AR096:2, AR299:2, AR039:2, AR185:2, AR060:2, AR089:2, AR219:2 H0556:11, H0052:11, L0748:10, L0439:10, L0809:9, H0265:7, H0618:7, L0764:6, L0805:6, L0769:5, L0777:5, L0758:5, H0253:4, L0601:4, S0358:3, H0251:3, H0617:3, S0438:3, L5565:3, L3905:3, S0152:3, S0206:3, L0747:3, H0445:3, H0542:3, H0341:2, S0420:2, L0717:2, L3388:2, H0550:2, H0559:2, H0620:2, H0428:2, H0135:2, H0087:2, T0041:2, H0494:2, L0648:2, L0766:2, L0774:2, L0368:2, L0787:2, L0666:2, L0665:2, H0520:2, H0547:2, H0658:2, H0696:2, L0744:2, L0754:2, L0745:2, L0731:2, L0591:2, L0593:2, L0361:2, T0002:1, H0686:1, S0040:1, S0218:1, L0426:1, S0116:1, H0484:1, S0418:1, S0376:1, H0619:1, H0393:1, H0261:1, H0549:1, H0370:1, H0486:1, T0039:1, H0318:1, S0474:1, H0581:1, H0194:1, T0110:1, H0046:1, H0123:1, H0050:1, H0012:1, S0051:1, H0083:1, H0510:1, H0266:1, H0030:1, H0553:1, H0181:1, L0055:1, L0456:1, H0040:1, H0616:1, T0042:1, S0002:1, H0529:1, L0763:1, L0770:1, L0638:1, L0639:1, L0772:1, L0800:1, L0643:1, L0662:1, L0363:1, L0794:1, L0649:1, L0803:1, L0375:1, L0378:1, L0655:1, L0658:1, L0659:1, L0783:1, L5623:1, L0789:1, L0790:1, L0791:1, L0792:1, L0664:1, S0148:1, L0438:1, L0352:1, H0519:1, H0593:1, H0659:1, H0670:1, H0672:1, H0539:1, S0378:1, H0521:1, S0044:1, H0555:1, H0436:1, L0740:1, L0779:1, L0759:1, S0031:1, H0595:1, L0608:1, H0665:1, H0667:1, H0423:1, S0424:1, L2352:1, H0008:1 and H0352:1.
340	HTXDG92	658730	350	216 - 416	753	AR218:44, AR277:37, AR283:37, AR219:35, AR055:31, AR316:30, AR089:29, AR104:23, AR299:21, AR240:20, AR313:20, AR039:19, AR282:19, AR185:19, AR096:18, AR060:17, AR300:17 L0777:11, H0618:7, L0438:6, H0144:5, L0758:5, S0410:4, H0059:4, L0601:4, H0556:3, H0253:3, H0052:3, H0620:3, H0617:3, L0764:3, L0768:3, L0747:3, H0265:2, H0341:2, S0046:2, S0222:2, H0013:2, H0069:2, S0049:2, H0150:2, H0087:2, L0351:2, L0771:2, L0766:2, L0665:2, H0547:2, H0659:2, L0748:2, L0439:2, L0754:2, L0749:2, H0542:2, L3643:1, S0040:1, H0717:1, H0716:1, S0114:1, T0049:1, H0583:1, H0657:1, H0656:1, H0381:1, H0663:1, S0358:1, H0734:1, S0007:1, H0747:1, S0278:1, H0261:1, H0550:1, H0392:1, H0486:1, T0114:1, S0010:1, H0581:1, H0374:1, H0327:1, H0545:1, H0457:1, H0012:1, H0024:1, H0015:1, H0510:1, H0594:1, H0188:1, H0292:1, H0286:1, H0622:1, H0181:1, H0135:1, H0040:1, H0063:1, H0100:1, T0041:1, H0561:1, S0440:1, H0509:1, H0529:1, L0640:1, L0770:1, L0769:1, L3905:1, L5566:1, L0773:1, L0662:1, L0363:1, L0774:1, L0775:1, L0806:1, L0559:1, L0783:1, L0383:1, L5623:1, H0698:1, S0374:1, H0520:1, H0519:1, S0292:1, S0126:1, H0682:1, S0380:1, H0696:1, S0027:1, L0740:1, L0731:1, H0445:1, L0605:1, L0592:1 and H0543:1.
341	HTXET11	581521	351	178 - 267	754	AR240:7, AR055:6, AR060:5, AR283:5, AR282:5, AR300:4, AR218:4, AR277:4, AR089:3, AR185:3, AR104:3, AR039:3, AR096:3, AR316:3, AR313:2, AR299:2, AR219:2 H0265:1 and S0442:1.
342	HTXJD85	840391	352	211 - 306	755	AR313:38, AR039:32, AR096:17, AR185:17, AR300:17, AR277:16, AR299:15, AR089:15, AR240:12, AR316:10, AR219:10, AR104:9, AR060:8, AR055:8, AR218:8, AR282:6, AR283:4

343	HTXJY08	637774	353	108 - 158	756	H0556:2, L0638:1, L0748:1 and L0439:1. AR055:2, AR060:2, AR300:2, AR299:2, AR313:2, AR185:1, AR282:1, AR089:1, AR039:1, AR316:1, AR219:1 H0556:1, S0442:1, H0036:1, H0590:1, H0024:1, H0100:1, L0769:1, L0667:1, L0438:1, L0740:1 and L0777:1.
344	HTXMMZ07	834881	354	319 - 432	757	AR277:20, AR104:8, AR060:7, AR055:7, AR316:6, AR283:6, AR240:6, AR300:5, AR299:5, AR096:5, AR282:5, AR218:5, AR185:4, AR039:4, AR313:3, AR089:3, AR219:3 L0439:6, H0556:3, S0007:2, H0253:2, L0744:2, L0740:2, L0731:2, H0583:1, H0656:1, S0442:1, H0069:1, L0021:1, H0618:1, H0581:1, H0041:1, H0488:1, L0770:1, L0800:1, L0766:1, L0803:1, L0375:1, L0807:1, L0382:1, L0791:1, L0793:1, L0352:1, S0432:1, L0741:1 and L0779:1.
345	HUFCL31	801938	355	287 - 367	758	AR060:26, AR240:10, AR300:9, AR096:9, AR316:8, AR299:8, AR089:8, AR218:7, AR313:5, AR219:5, AR283:5, AR055:4, AR039:4, AR104:4, AR185:3, AR282:3, AR277:2 L0764:5, L0771:5, H0506:4, L0374:3, S0434:3, S0356:1, S0410:1, H0264:1, L0372:1, L0783:1, L0532:1 and L0663:1.
346	HUKDF20	566823	356	214 - 315	759	AR055:7, AR218:6, AR060:6, AR300:5, AR282:4, AR104:4, AR313:4, AR283:4, AR185:4, AR299:4, AR277:3, AR219:3, AR089:3, AR316:3, AR039:3, AR240:3, AR096:2 H0261:1, H0266:1 and H0059:1.
347	HUKDY82	570896	357	187 - 285	760	AR039:36, AR313:36, AR299:19, AR277:17, AR096:15, AR185:14, AR089:14, AR300:14, AR104:14, AR218:12, AR219:11, AR316:11, AR240:8, AR060:8, AR055:8, AR282:8, AR283:5 S0053:4, H0556:3, H0673:3, H0618:2, H0083:2, H0179:2, H0674:2, S0216:2, T0002:1, S0134:1, S0116:1, L3645:1, H0550:1, H0409:1, H0069:1, H0427:1, H0271:1, H0090:1, H0634:1, H0059:1, S0052:1, S0428:1, H0144:1, S0152:1, H0576:1 and S0031:1.
348	HUSCJ14	894699	358	74 - 661	761	AR239:10, AR228:10, AR227:9, AR237:9, AR230:8, AR233:8, AR287:8, AR203:7, AR288:7, AR176:6, AR184:6, AR199:6, AR229:6, AR215:6, AR190:6, AR200:5, AR245:5, AR174:5, AR234:5, AR191:5, AR180:4, AR297:4, AR232:4, AR226:4, AR289:4, AR298:4, AR194:4, AR170:4, AR257:4, AR061:3, AR292:3, AR173:3, AR231:3, AR262:3, AR242:3, AR284:3, AR286:3, AR251:3, AR179:3, AR236:3, AR238:3, AR255:3, AR161:3, AR189:3, AR162:3, AR235:3, AR293:3, AR282:3, AR188:3, AR294:3, AR165:3, AR163:3, AR164:3, AR166:3, AR285:2, AR201:2, AR181:2, AR295:2, AR177:2, AR247:2, AR290:2, AR205:2, AR300:2, AR225:2, AR260:2, AR198:2, AR261:2, AR193:2, AR291:2, AR268:2, AR175:2, AR270:2, AR183:2, AR211:2, AR296:2, AR196:2, AR185:2, AR258:2, AR250:2, AR240:2, AR178:2, AR204:2, AR195:2, AR060:2, AR312:1, AR311:1, AR210:1, AR224:1, AR243:1, AR299:1, AR269:1, AR316:1, AR275:1, AR186:1, AR172:1, AR039:1, AR267:1, AR256:1, AR263:1, AR055:1, AR089:1, AR217:1 L2654:6, L0741:4, S0192:4, H0677:4, H0556:3, H0013:3, H0052:3, L0766:3, L0744:3, L0439:3, L0757:3, H0265:2, S0040:2, S0410:2, H0599:2, H0545:2, H0266:2, H0030:2, H0135:2, L3905:2, L5622:2, H0520:2, H0547:2, H0519:2, L0748:2, L0756:2, L0777:2, L0780:2, L0758:2, L0485:2, L0604:2, H0739:1, H0713:1, S0134:1, S0218:1, H0656:1, L2909:1, S0212:1, H0663:1, S0420:1,

						L1562:1, S0360:1, S0408:1, H0742:1, S0132:1, S0476:1, H0393:1, H0587:1, T0040:1, H0575:1, H0309:1, H0009:1, L0471:1, H0620:1, H0510:1, H0290:1, S0250:1, S0023:1, T0023:1, H0488:1, H0268:1, T0041:1, T0042:1, H0538:1, S0210:1, L0763:1, L0800:1, L0771:1, L0794:1, L0804:1, L0774:1, L0775:1, L5623:1, L0793:1, L2652:1, L2257:1, L2260:1, L0710:1, L2262:1, H0144:1, H0593:1, H0435:1, H0555:1, L0743:1, L2075:1, L0779:1, L0752:1, S0031:1, S0436:1, L0596:1, L0605:1, L0601:1, S0106:1, H0667:1, S0276:1 and L3576:1.
349	HUSGL67	792637	359	350 - 493	762	AR252:82, AR250:77, AR253:70, AR222:49, AR219:44, AR218:40, AR254:37, AR169:32, AR171:31, AR168:30, AR214:28, AR217:27, AR212:25, AR215:22, AR309:22, AR096:21, AR316:20, AR170:20, AR216:19, AR172:18, AR223:18, AR264:17, AR224:16, AR308:16, AR312:15, AR263:15, AR183:14, AR268:13, AR313:13, AR039:13, AR225:12, AR311:11, AR180:10, AR291:10, AR271:10, AR181:9, AR269:9, AR240:9, AR177:9, AR176:9, AR242:8, AR299:8, AR229:8, AR213:8, AR173:8, AR290:8, AR235:8, AR247:8, AR179:8, AR243:7, AR270:7, AR266:7, AR182:7, AR238:7, AR178:7, AR245:7, AR189:7, AR053:7, AR246:6, AR267:6, AR272:6, AR190:6, AR089:6, AR165:6, AR175:6, AR193:6, AR275:6, AR164:6, AR162:6, AR166:6, AR261:6, AR212:6, AR161:6, AR163:5, AR289:5, AR300:5, AR174:5, AR211:5, AR199:5, AR234:5, AR197:5, AR297:5, AR200:5, AR210:5, AR296:5, AR282:5, AR295:5, AR237:5, AR198:5, AR283:4, AR204:4, AR287:4, AR231:4, AR191:4, AR288:4, AR285:4, AR230:4, AR257:4, AR274:4, AR055:4, AR033:4, AR195:4, AR061:4, AR188:4, AR196:4, AR236:4, AR293:4, AR294:3, AR185:3, AR104:3, AR239:3, AR286:3, AR226:3, AR203:3, AR277:3, AR060:3, AR205:3, AR262:3, AR255:3, AR228:3, AR201:3, AR256:3, AR260:2, AR233:2, AR258:2, AR232:2, AR227:2, AR192:1
350	HUSGU40	684975	360	500 - 640	763	S0358:2, S0116:1, S0360:1, S0045:1, H0497:1, H0486:1, H0250:1, S0010:1, S0474:1, H0266:1, H0271:1, T0006:1, H0412:1, L3815:1, L0766:1, L2258:1, H0710:1, H0518:1, S3014:1 and H0543:1.
351	HUSIR18	762858	361	83 - 151	764	AR218:67, AR219:57, AR096:53, AR240:49, AR283:44, AR313:43, AR316:37, AR089:33, AR039:32, AR185:29, AR277:25, AR282:24, AR104:24, AR060:23, AR299:23, AR300:22, AR055:19
352	HUVDJ48	564853	362	196 - 213	765	L0748:4, H0622:3, L0777:3, H0624:2, H0013:2, H0520:2, H0539:2, L0439:2, L0754:2, L0747:2, L0757:2, L0758:2, L0593:2, L0002:1, H0664:1, H0580:1, S0007:1, H0497:1, H0333:1, H0599:1, H0581:1, L0483:1, H0598:1, H0040:1, H0412:1, L0351:1, T0041:1, L0769:1, L0771:1, L0662:1, L0767:1, L0768:1, L0766:1, L0381:1, L0806:1, L0656:1, L0659:1, L0809:1, L0663:1, L0665:1, H0672:1, S0152:1, L0740:1, L0749:1, L0750:1, L0779:1, L0752:1, L0480:1, L0591:1 and H0543:1.
353	HWAAI12	830432	363	223 - 312	766	AR055:6, AR060:5, AR283:5, AR039:5, AR185:4, AR096:4, AR240:4, AR104:4, AR299:4, AR300:3, AR089:3, AR316:3, AR313:3, AR282:3, AR218:2, AR277:2, AR219:2 H0393:1, H0056:1 and L0662:1.
						AR282:10, AR313:9, AR104:7, AR089:5, AR300:4, AR096:4, AR185:4, AR316:4, AR240:3, AR299:3, AR060:2, AR219:2, AR283:2, AR218:2, AR039:2, AR277:2, AR055:2 L0794:10, H0251:9, H0547:9, L0439:8, L0731:8, L0747:7, L0438:6, H0351:5, L0750:5, S0356:4, L0769:4, L0768:4, L0766:4, L0805:4, L0809:4, L0777:4, L0758:4, L0596:4, S0410:3, H0009:3,



						T0006:3, H0124:3, T0041:3, L0666:3, H0144:3, H0520:3, S0028:3, L0742:3, L0749:3, H0543:3, H0661:2, H0305:2, S0360:2, L0103:2, H0013:2, H0581:2, S0049:2, H0052:2, L0157:2, L0471:2, H0594:2, H0031:2, H0087:2, H0100:2, T0042:2, S0344:2, H0529:2, L0763:2, L0761:2, L0662:2, L0803:2, L0806:2, L0664:2, H0436:2, L0756:2, L0752:2, L0605:2, L0595:2, H0556:1, T0002:1, S0040:1, H0717:1, H0716:1, H0294:1, S0134:1, H0341:1, H0402:1, S0354:1, S0007:1, H0747:1, L0717:1, S0278:1, L0394:1, H0549:1, S0222:1, H0333:1, L0622:1, H0486:1, H0575:1, S0010:1, H0085:1, H0597:1, H0545:1, H0566:1, H0620:1, H0271:1, H0687:1, H0615:1, H0622:1, H0673:1, H0674:1, H0412:1, H0413:1, H0056:1, H0130:1, H0646:1, S0144:1, L0770:1, L0796:1, L0667:1, L0772:1, L0373:1, L0372:1, L0800:1, L0645:1, L0764:1, L0648:1, L0767:1, L0650:1, L0657:1, L0517:1, L0789:1, L0790:1, L0665:1, H0690:1, H0658:1, H0670:1, H0672:1, S0378:1, S0380:1, H0521:1, S0102:1, S0390:1, S0027:1, L0743:1, L0779:1, L0755:1, L0759:1, S0031:1, S0436:1, L0601:1, H0136:1, S0276:1, H0542:1 and S0424:1.
354	HWBBQ70	689121	364	222 - 353	767	AR300:3, AR313:3, AR299:2, AR039:2, AR060:2, AR089:2, AR282:2, AR240:2, AR185:2, AR316:2, AR277:2, AR055:2, AR096:2, AR104:1, AR283:1 L0717:2, H0580:1, S0222:1, L0662:1, H0436:1, L0748:1, H0445:1 and S0308:1.
355	HWBBU75	780360	365	783 - 938	768	L0665:4, H0457:3, H0264:3, L0766:3, H0521:3, L0745:3, H0556:2, H0580:2, S0352:2, L0761:2, L0806:2, L0789:2, L0748:2, H0542:2, H0255:1, S0278:1, H0581:1, H0271:1, H0719:1, H0413:1, H0494:1, S0002:1, S0426:1, L0769:1, L0774:1, H0660:1, L0750:1, L0752:1, L0753:1 and S0424:1.
356	HWBCN36	722259	366	378 - 650	769	AR104:3, AR185:3, AR039:2, AR055:2, AR282:2, AR300:2, AR060:1, AR096:1, AR089:1, AR240:1, AR277:1, AR316:1 H0580:1
357	HWBDJ08	762860	367	253 - 405	770	AR13:31, AR039:30, AR096:19, AR218:18, AR316:17, AR300:17, AR219:16, AR299:13, AR185:12, AR277:12, AR089:12, AR104:8, AR240:7, AR060:5, AR282:5, AR055:4, AR283:1 L0794:7, H0556:4, S0414:4, L0779:4, H0031:3, S0216:3, H0265:2, H0220:2, H0688:2, H0634:2, L0655:2, L0665:2, H0659:2, S0328:2, H0521:2, L0753:2, L0758:2, H0422:2, S0114:1, H0300:1, S0356:1, S0360:1, H0580:1, S0046:1, H0643:1, L3655:1, H0250:1, H0069:1, H0635:1, H0042:1, H0575:1, H0581:1, S0049:1, L0045:1, H0622:1, H0644:1, H0641:1, S0002:1, L0763:1, L0653:1, L0776:1, L0793:1, L0777:1, L0755:1, L0731:1, L0593:1 and H0542:1.
358	HWBFX16	827312	368	267 - 278	771	AR185:370, AR104:325, AR039:250, AR055:245, AR060:184, AR300:176, AR089:172, AR316:144, AR096:127, AR277:127, AR282:117, AR219:93, AR299:89, AR283:88, AR313:86, AR218:58, AR240:58 S0114:1 and H0580:1.
359	HWDAQ96	796743	369	866 - 964	772	AR060:28, AR219:25, AR104:24, AR185:23, AR299:23, AR316:22, AR055:21, AR218:20, AR039:19, AR300:19, AR096:19, AR240:18, AR282:15, AR089:14, AR283:13, AR277:9, AR313:9 H0556:19, L3659:16, H0265:15, S0440:11, S0418:10, L0755:9, S0420:8, S0358:8, S0436:8, L0752:7, H0253:6, L0751:6, L0747:6, L0750:6, L0596:6, S0212:5, H0618:5, H0545:5, H0012:5, H0617:5, H0413:5, S0406:5, L0740:5, L0601:5, H0295:4, S0360:4, H0039:4, H0494:4, H0641:4, L0764:4,

						L0776:4, L0758:4, H0657:3, H0483:3, S0356:3, S0376:3, S0408:3, S0346:3, H0040:3, S0344:3, L0637:3, H0658:3, H0660:3, S0328:3, H0522:3, L0743:3, L0749:3, L0756:3, L0731:3, L0757:3, H0445:3, S0040:2, H0713:2, H0294:2, H0341:2, H0484:2, H0661:2, H0305:2, H0125:2, L3645:2, H0580:2, H0586:2, H0587:2, H0052:2, H0046:2, H0009:2, H0081:2, H0620:2, H0266:2, H0124:2, H0135:2, H0551:2, H0100:2, L0646:2, L0768:2, L0774:2, L0806:2, L5623:2, H0547:2, H0435:2, H0539:2, L0748:2, L0754:2, L0588:2, L0589:2, L0608:2, L0593:2, H0543:2, S0384:2, H0170:1, H0140:1, L3643:1, H0716:1, H0740:1, H0650:1, H0656:1, H0254:1, H0300:1, H0638:1, S0410:1, H0637:1, H0742:1, H0733:1, H0734:1, S0045:1, S0046:1, S0476:1, H0619:1, S0278:1, S0222:1, H0600:1, H0497:1, H0632:1, H0559:1, H0013:1, H0069:1, H0042:1, H0706:1, S0010:1, S0182:1, H0318:1, H0746:1, H0263:1, T0110:1, H0024:1, H0416:1, H0292:1, H0286:1, S0250:1, H0622:1, L0194:1, L0483:1, T0006:1, H0213:1, H0644:1, H0181:1, H0606:1, L0055:1, H0090:1, H0038:1, H0616:1, T0067:1, H0488:1, H0412:1, H0056:1, T0041:1, T0042:1, L0475:1, H0396:1, S0144:1, S0142:1, L3815:1, S0210:1, S0002:1, H0695:1, L0763:1, L0770:1, L0769:1, L0639:1, L0643:1, L0662:1, L0649:1, L0381:1, L0388:1, L0533:1, L0650:1, L0775:1, L0523:1, L0378:1, L0657:1, L0517:1, L0782:1, L0783:1, L0519:1, L5622:1, L0666:1, L0663:1, L0665:1, L0710:1, H0698:1, L0438:1, H0519:1, H0689:1, H0682:1, H0684:1, H0659:1, H0648:1, H0672:1, S0330:1, L0602:1, H0521:1, S0044:1, H0134:1, H0478:1, H0626:1, S014:1, S0027:1, S0028:1, S0206:1, L0745:1, L0780:1, L0759:1, S0031:1, S0434:1, L0597:1, L0599:1, S0026:1, H0423:1, H0422:1, S0424:1, H0506:1 and H0352:1.
360	HWDAJ01	794016	370	288 - 362	773	AR282:2, AR060:2, AR055:2, AR185:2, AR283:1, AR104:1, AR316:1, AR039:1, AR218:1, H0600:1
361	HWHPB78	740778	371	200 - 400	774	H0437:2, L0769:2, S0028:2, L0439:2, S0436:2, H0556:1, H0125:1, S0420:1, H0619:1, H0587:1, H0635:1, H0253:1, H0318:1, H0744:1, H0052:1, H0009:1, H0172:1, H0266:1, H0135:1, H0494:1, L3905:1, L0438:1, L3828:1, H0547:1, H0539:1, H0521:1, L0593:1, H0506:1 and H0008:1.
362	HWLBO67	834315	372	42 - 161	775	S0374:1
363	HWLGP26	834770	373	1091 - 1306	776	AR313:10, AR039:7, AR096:6, AR316:5, AR299:4, AR240:4, AR300:3, AR277:3, AR089:3, AR060:2, AR185:2, AR282:2, AR055:2, AR218:1, AR283:1
						L0766:5, L0803:5, L0794:3, S0410:2, H0551:2, H0435:2, L0756:2, L0731:2, H0585:1, S0212:1, S0282:1, L0534:1, S0442:1, S0354:1, H0735:1, H0486:1, H0014:1, H0354:1, H0644:1, H0135:1, H0647:1, L0369:1, L0640:1, L0763:1, L0770:1, L3905:1, L0646:1, L0771:1, L0804:1, L0784:1, L0528:1, L0789:1, L0790:1, L0792:1, L3827:1, H0658:1, L0749:1, L0758:1 and S0436:1.
364	HILCA24	869856	374	191 - 1174	777	AR316:4, AR282:2, AR096:1, AR299:1, AR039:1
						L0748:4, H0090:2, L0659:2, H0521:2, L0777:2, L0608:2, H0543:2, T0002:1, S0114:1, L3658:1, S0358:1, S0408:1, L3649:1, T0109:1, H0581:1, H0622:1, H0031:1, H0644:1, S0002:1, L0657:1, L0526:1, L0789:1, L0664:1, S0380:1, H0522:1, L0749:1 and L0779:1.
	HILCA24	782450	393	189 - 1172	796	
365	HE2CA60	888705	375	1731 - 1754	778	AR313:86, AR299:44, AR277:42, AR283:37, AR039:37, AR316:36, AR218:34, AR096:34, AR219:34,



						S0362:1, H0373:1, S0388:1, H0354:1, H0099:1, H0594:1, H0266:1, H0416:1, H0188:1, S0318:1, S0334:1, H0687:1, S0338:1, H0252:1, H0213:1, H0553:1, H0111:1, H0617:1, H0169:1, H0163:1, T0067:1, L0435:1, L0564:1, S0440:1, H0509:1, S0150:1, H0646:1, H0652:1, L3815:1, L0371:1, L0769:1, L0771:1, L0649:1, L0774:1, L0375:1, L0651:1, L0378:1, L0805:1, L0606:1, L0657:1, L0384:1, L0529:1, L5623:1, L0793:1, L0664:1, S0216:1, H0144:1, H0723:1, H0593:1, H0689:1, H0659:1, H0672:1, S0328:1, H0539:1, H0518:1, H0521:1, H0696:1, H0134:1, L0612:1, H0732:1, S0312:1, S0390:1, S0037:1, S014:1, S0032:1, L0743:1, L0749:1, L0752:1, L0755:1, H0707:1, L0591:1, L0592:1, H0653:1, H0136:1, S0412:1 and H0721:1.
	HPWTF23	843700	395	283 - 675	798	
367	HLWAU42	695737	377	220 - 393	780	AR055:57, AR060:56, AR185:55, AR299:45, AR283:43, AR089:41, AR282:37, AR104:35, AR316:31, AR300:25, AR039:24, AR096:23, AR240:22, AR313:22, AR277:22, AR218:16, AR219:9 L0740:8, H0486:5, L0439:5, H0733:4, L0606:4, L0731:4, H0553:3, S0422:3, H0672:3, H0696:3, L0747:3, H0581:2, H0428:2, H0169:2, L0774:2, L0518:2, L0438:2, H0436:2, L0744:2, L0779:2, L0752:2, S0436:2, L0362:2, S0242:2, S0412:2, S0040:1, H0713:1, H0656:1, H0341:1, H0661:1, H0459:1, S0444:1, S0360:1, H0729:1, H0728:1, H0734:1, L0717:1, H0411:1, S0278:1, H0431:1, H0592:1, H0587:1, H0331:1, H0013:1, H0156:1, H0599:1, L0105:1, H0015:1, H0051:1, H0355:1, S0022:1, H0030:1, H0031:1, H0032:1, S0440:1, H0509:1, H0132:1, H0646:1, S0210:1, L0770:1, L3905:1, L0766:1, L0775:1, L0661:1, L0783:1, L0666:1, L0664:1, L0665:1, H0723:1, H0724:1, H0648:1, S0330:1, S0044:1, S0028:1, L0743:1, L0756:1, L0755:1, L0759:1, H0595:1, S0192:1, S0276:1, S0196:1 and H0423:1.
	HLWAU42	840855	396	1751 - 1924	799	
368	HGCAC19	851527	378	317 - 346	781	AR219:2, AR316:2, AR096:1 L0794:15, L0803:12, L0766:7, H0013:6, H0090:6, L0663:6, L0777:6, L0731:6, L0759:6, H0457:5, H0328:5, L0493:5, L0666:5, L0754:5, L0749:5, H0543:5, H0656:4, S0358:4, H0615:4, L0665:4, H0521:4, L0779:4, L0588:4, H0305:3, S0360:3, H0036:3, H0052:3, T0042:3, L0761:3, L0805:3, L0809:3, H0144:3, H0670:3, H0696:3, L0591:3, S0134:2, H0657:2, L3659:2, S0418:2, S0442:2, S0007:2, S0045:2, L0717:2, H0600:2, H0486:2, H0156:2, H0575:2, H0590:2, H0024:2, S0022:2, L0483:2, H0135:2, H0038:2, H0560:2, S0422:2, L0457:2, H0529:2, L0625:2, L0648:2, L0776:2, L0655:2, L0527:2, S0374:2, H0520:2, H0519:2, H0659:2, H0436:2, L0748:2, L0745:2, L0581:2, L0361:2, H0542:2, H0423:2, S0424:2, H0624:1, H0171:1, H0556:1, T0002:1, H0686:1, S0342:1, H0717:1, T0049:1, S0430:1, H0650:1, H0341:1, H0663:1, H0589:1, S0356:1, S0376:1, S0408:1, S0410:1, L2336:1, H0329:1, S0046:1, H0645:1, H0369:1, S6014:1, H0370:1, H0455:1, H0438:1, H0602:1, H0586:1, H0587:1, H0574:1, H0559:1, S0280:1, L0021:1, H0318:1, S0474:1, H0263:1, T0115:1, H0545:1, L0157:1, H0123:1, L0471:1, H0015:1, S0388:1, S0051:1, H0375:1, H0271:1, H0188:1, S0312:1, S0003:1, H0688:1, H0039:1, H0622:1, H0031:1, H0644:1, L0055:1, H0169:1, L0456:1, H0163:1, H0634:1, H0551:1, H0379:1, H0488:1, H0279:1, L0475:1, S0352:1, H0652:1, S0208:1, L0640:1, L0763:1, L0500:1, L0769:1, L0646:1, L0662:1, L0649:1, L0498:1, L0804:1,

							L0650:1, L0784:1, L0806:1, L0653:1, L0515:1, L0659:1, L0526:1, L0519:1, L0788:1, L0790:1, L0791:1, L0664:1, S0053:1, S0296:1, H0547:1, S0126:1, H0682:1, H0684:1, H0658:1, H0660:1, H0672:1, S0380:1, H0518:1, H0525:1, S0044:1, S0404:1, S0406:1, H0479:1, S0432:1, S3014:1, L0744:1, L0750:1, L0780:1, L0753:1, L0604:1, S0106:1, S0242:1, S0196:1, S0452:1 and H0506:1.
	HGCAC19	842540	397	315 - 344	800		
	HGCAC19	801999	398	317 - 346	801		
369	HPQAX38	845752	379	295 - 345	782		AR313:99, AR039:86, AR300:47, AR299:43, AR096:43, AR185:41, AR089:37, AR277:36, AR104:30, AR240:30, AR219:29, AR316:28, AR218:23, AR282:20, AR060:19, AR055:12, AR283:6 S0136:462 and H0413:1.
	HPQAX38	843592	399	295 - 345	802		
370	HEQBJ01	876546	380	2603 - 2662	783		AR277:12, AR283:11, AR219:11, AR316:10, AR089:10, AR218:9, AR104:9, AR055:8, AR282:8, AR313:8, AR096:7, AR300:7, AR185:7, AR299:7, AR240:7, AR060:5, AR039:5 S0360:3, H0619:3, H0673:2, L0438:2, H0685:1, S0444:1, H0544:1, H0266:1, H0163:1, L0770:1, L0646:1, L0768:1, L0766:1, L0803:1, L0776:1, S0152:1, S0027:1, L0439:1, L0747:1, L0777:1, L0752:1 and L0758:1.
	HEQBJ01	861786	400	2603 - 2662	803		
	HEQBJ01	834633	401	505 - 564	804		
371	HTOJL95	762851	381	221 - 397	784		AR313:24, AR039:22, AR096:13, AR299:13, AR300:11, AR185:11, AR218:10, AR219:10, AR089:9, AR316:9, AR277:9, AR104:7, AR055:7, AR060:7, AR240:7, AR282:6, AR283:4 H0264:5, S0114:3, S0134:2, S0428:2, H0381:1, H0255:1, H0402:1, H0339:1, H0581:1, H0615:1, H0090:1, S0426:1, L0369:1, L0769:1, L0779:1, H0444:1 and H0445:1.
	HTOJL95	806212	402	134 - 310	805		
372	HTLIF12	901225	382	644 - 871	785		AR277:72, AR283:62, AR282:57, AR219:50, AR313:45, AR089:43, AR316:42, AR218:40, AR104:38, AR096:35, AR055:33, AR240:33, AR299:33, AR300:31, AR185:30, AR039:30, AR060:25 H0616:14, H0038:12, H0618:6, H0253:5, L0758:5, L0768:4, H0411:2, L0779:2, H0747:1, L0151:1, L0697:1 and S0398:1.
	HTLIF12	891533	403	644 - 871	806		
	HTLIF12	886780	404	644 - 871	807		
	HTLIF12	870167	405	644 - 871	808		
	HTLIF12	842691	406	644 - 871	809		
	HTLIF12	834946	407	642 - 869	810		
373	HTEEF26	879704	383	262 - 285	786		AR316:12, AR104:10, AR218:7, AR055:6, AR060:6, AR283:6, AR219:5, AR240:5, AR282:5, AR185:5, AR089:4, AR300:4, AR313:3, AR096:3, AR299:2, AR039:2, AR277:2 L0794:5, L0766:4, H0457:3, H0038:3, L0803:3, L0777:3, L0752:3, H0574:2, H0039:2, H0040:2,

							L0763:2, L0775:2, L0666:2, L0438:2, S0406:2, L0756:2, L0779:2, H0665:2, L0411:1, H0624:1, H0170:1, S0040:1, S0001:1, S0348:1, S0354:1, S0360:1, S0408:1, H0580:1, S0045:1, S0222:1, H0486:1, T0039:1, H0575:1, H0590:1, H0581:1, H0596:1, H0687:1, S0003:1, H0328:1, H0644:1, H0032:1, L0455:1, H0090:1, H0616:1, H0551:1, H0412:1, T0042:1, H0494:1, L0770:1, L0637:1, L0372:1, L0641:1, L0771:1, L0767:1, L0776:1, L0607:1, H0144:1, S0374:1, T0068:1, H0547:1, H0519:1, H0658:1, H0672:1, S0330:1, H0521:1, S0044:1, L0745:1, L0731:1, L0758:1, L0759:1, S0434:1 and S0196:1.
	HTEEF26	789606	408	262 - 285	811		
374	HTEED26	762846	384	261 - 359	787		AR055:5, AR060:5, AR240:4, AR282:3, AR300:3, AR283:3, AR277:2, AR089:2, AR185:2, AR218:2, AR299:2, AR316:2, AR313:1, AR104:1, AR039:1, AR096:1 H0038:3
	HTEED26	753425	409	259 - 357	812		
375	HPJB51	878609	385	716 - 925	788		AR219:7, AR055:6, AR039:6, AR277:6, AR096:5, AR316:5, AR060:5, AR104:5, AR218:5, AR185:5, AR282:5, AR299:4, AR300:4, AR240:4, AR313:4, AR283:4, AR089:3 S0152:1 and H0521:1.
	HPJB51	829114	410	715 - 924	813		
376	HOABP31	868327	386	148 - 522	789		AR218:223, AR219:206, AR096:172, AR240:106, AR313:97, AR316:78, AR185:62, AR039:55, AR104:54, AR299:44, AR300:41, AR089:39, AR055:32, AR282:30, AR277:24, AR060:20, AR283:14
	HOABP31	835084	411	148 - 519	814		
377	HBJHT01	587262	387	200 - 265	790		AR313:10, AR039:8, AR299:6, AR300:5, AR185:5, AR055:5, AR277:5, AR060:4, AR096:4, AR089:4, AR316:4, AR240:3, AR104:3, AR282:2, AR218:2, AR283:2 L0667:2, S0114:1, H0351:1, H0318:1, H0615:1 and L0764:1.
	HBJHT01	580026	412	193 - 336	815		
378	HE8FC45	845672	388	155 - 298	791		AR313:70, AR039:50, AR299:33, AR300:31, AR096:29, AR089:28, AR185:28, AR277:20, AR219:20, AR316:19, AR240:18, AR218:16, AR104:15, AR282:14, AR060:14, AR055:10, AR283:6 L0534:2, L0539:2, L0109:2, L0562:1, S0222:1, H0587:1, H0013:1, H0635:1, H0615:1, H0477:1, H0264:1, T0042:1, L0766:1, L0379:1, L0365:1, S0053:1, L0758:1 and H0543:1.
	HE8FC45	843781	413	155 - 298	816		

**Table 1C** summarizes additional polynucleotides encompassed by the invention (including cDNA clones related to the sequences (Clone ID:), contig sequences (contig identifier (Contig ID:) contig nucleotide sequence identifiers (SEQ ID NO:X)), and genomic sequences (SEQ ID NO:B). The first column provides a unique clone identifier, "Clone ID:", for a cDNA clone related to each contig sequence. The second column provides the sequence identifier, "SEQ ID NO:X", for each contig sequence. The third column provides a unique contig identifier, "Contig ID:" for each contig sequence. The fourth column, provides a BAC identifier "BAC ID NO:A" for the BAC clone referenced in the corresponding row of the table. The fifth column provides the nucleotide sequence identifier, "SEQ ID NO:B" for a fragment of the BAC clone identified in column four of the corresponding row of the table. The sixth column, "Exon From-To", provides the location (i.e., nucleotide position numbers) within the polynucleotide sequence of SEQ ID NO:B which delineate certain polynucleotides of the invention that are also exemplary members of polynucleotide sequences that encode polypeptides of the invention (e.g., polypeptides containing amino acid sequences encoded by the polynucleotide sequences delineated in column six, and fragments and variants thereof).

**Table 1C**

<b>cDNA Clone ID</b>	<b>SEQ ID NO:X</b>	<b>CONTIG ID:</b>	<b>BAC ID: A</b>	<b>SEQ ID NO:B</b>	<b>EXON From-To</b>
H6BSF56	11	762968	AC069362	817	1-131
H6BSF56	11	762968	AC027584	818	1-162
H6BSF56	11	762968	AC011101	819	1-100
H6BSF56	11	762968	AC073446	820	1-140
H6BSF56	11	762968	AC026556	821	1-114
H6BSF56	11	762968	AL136171	822	1-61
H6BSF56	11	762968	AC025975	823	1-136
H6BSF56	11	762968	AC073219	824	1-123
H6BSF56	11	762968	AL162741	825	1-45
H6BSF56	11	762968	AC027584	826	1-368
H6BSF56	11	762968	AC073446	827	1-52 2626-2925
H6BSF56	11	762968	AL162741	828	1-102
H6EEC72	12	889401	AC012314	829	1-181 1281-1463 2719-2983 3158-3411 3804-6347 6745-6879 7118-7319 7420-7521 7859-8305 8552-8602 9988-10334 10415-10778

					11003-11127 11210-11303 11334-11832 13093-13145 13703-13837 13918-14152 15415-15511 15613-15742 15998-16087 16231-16307 16447-17211 18520-18796 21777-22001
H6EEC72	12	889401	AC009968	830	1-180 1275-1457 2712-2976 3150-3403 3796-6332 6730-6864 7103-7303 7404-7505 7843-8289 8536-8586 9970-10312 10393-10756 10981-11105 11188-11805 13068-13120 13678-13812 13905-13994
H6EEC72	12	889401	AC012314	831	1-43 861-1031 1576-1743 1924-2132 2203-2432 2473-2905 3177-3360 3651-4332 4422-4583 4830-4995 5086-5365
H6EEC72	12	889401	AC009968	832	1-43 857-1027 1570-1737 1918-2126 2197-2426 2467-2899 3171-3354 3644-4326 4416-4577 4824-4989 5080-5360
HACAB68	13	584773	AL160283	833	1-2811
HACAB68	13	584773	AL354793	834	1-3734



					3843-4723
HACAB68	13	584773	AL356058	835	1-3055 3165-4045
HACBS22	14	847113	AC012073	836	1-134 718-833 1002-1132 2357-2516 3762-3945 5344-5477 7446-7594 7742-7904 10636-10725 11138-12223 12583-12977 13095-13178 14224-14532 14668-14841 15779-16124 16257-16343 16508-16826 17489-17757 17847-18008 19028-19192 19755-23561 24286-24717 24920-25347 25567-25741 26629-26891 27895-27968
HACBS22	14	847113	AC012073	837	1-545
HADMA77	18	783049	AC007944	838	1-3350
HADMA77	18	783049	AC018656	839	1-3349
HADMA77	18	783049	AC021874	840	1-3351 4529-4959 6110-6438
HADMA77	18	783049	AC007944	841	1-941
HADMA77	18	783049	AC018656	842	1-432
HADMA77	18	783049	AC018656	843	1-941
HADMB15	19	847116	AC026666	844	1-385 406-780
HADMB15	19	847116	AC026281	845	1-114 430-875 896-1262
HAGDW20	22	637489	AC006453	846	1-1568
HAGDW20	22	637489	AC005629	847	1-1569
HAGDW20	22	637489	AC010098	848	1-1569
HAGDW20	22	637489	AC006453	849	1-438
HAGDW20	22	637489	AC006453	850	1-375
HAGDW20	22	637489	AC005629	851	1-438
HAGDW20	22	637489	AC005629	852	1-375
HAGFS57	25	847120	AC021238	853	1-140 3343-3636 5052-5179 5712-5796

					6486-6918 7867-8404 8934-9513 9711-10538 10984-11992 12080-12349 12485-12857 13895-14212 14994-15054 15169-15297 16132-16211 17721-17811 18135-18354 18363-18444 19661-19720 19841-20784 20920-21236 22168-24079
HAGFS57	25	847120	AC066613	854	1-433 1382-1919 2449-3028 3226-4053 4499-5507 5595-5864 6000-6372 7410-7727 8509-8569 8684-8812 9647-9726 11236-11326 11650-11869 11878-11959 13176-13235 13356-14299 14435-14752 15684-17595
HAGHR18	27	655435	AC009671	855	1-1134
HAJAY92	30	845601	AL353726	856	1-2332
HAJAY92	30	845601	AL353726	857	1-115
HAJAY92	30	845601	AL353726	858	1-115
HAQAI92	32	688037	AL118502	859	1-471 571-1561
HAQAI92	32	688037	AL161939	860	1-471 571-1561
HAQAI92	32	688037	AC004064	861	1-471 571-1561
HAQAI92	32	688037	AL118502	862	1-161
HAQAI92	32	688037	AL118502	863	1-285
HAQAI92	32	688037	AL161939	864	1-415
HAQAI92	32	688037	AL161939	865	1-285
HAQAI92	32	688037	AC004064	866	1-285
HAQAI92	32	688037	AC004064	867	1-415
HATBI94	35	839468	AC016372	868	1-1727
HATBI94	35	839468	AL390735	869	1-1729

HATBI94	35	839468	AL138791	870	1-1333
HATBI94	35	839468	AC016372	871	1-646
HATBI94	35	839468	AC016372	872	1-766
HATBI94	35	839468	AL390735	873	1-646
HATBI94	35	839468	AL390735	874	1-766
HATCB45	36	631172	AC009307	875	1-1044
HATCB45	36	631172	AC006501	876	1-1044
HATCB45	36	631172	AC009307	877	1-318
HATCB45	36	631172	AC009307	878	1-370
HATCB45	36	631172	AC006501	879	1-318
HATCB45	36	631172	AC006501	880	1-111
HATCI03	37	580805	AL137119	881	1-81 824-941 972-1185 2432-2705 3880-4812 4880-5011 5828-6591 8231-8398 8618-8767 9466-9728
HATCI03	37	580805	AL138688	882	1-81 825-942 973-1186 2433-2706 3881-4795 4870-5001 5818-6581 8221-8388 8608-8757 9456-9718
HATCI03	37	580805	AL137119	883	1-542
HATCI03	37	580805	AL138688	884	1-542
HATEH20	38	836056	AC006207	885	1-2845
HATEH20	38	836056	AC006207	886	1-76 1150-1290 1699-2395
HBAGD86	39	838799	AC016755	887	1-41 1648-1993 2035-3552 3554-6713
HBAGD86	39	838799	AC016755	888	1-161 696-809 2256-2753 6910-6991 7733-7857 9267-9458 10650-10734 11114-11562 11678-11801 12524-12817 14494-15914
HBAGD86	39	838799	AC016755	889	1-217
HBCJL35	40	1300785	AL158846	890	1-4302

					4512-4570 4837-5068 5373-5856 5965-6104 6899-7643 8898-9042 9567-9925
HBCJL35	40	1300785	AL158846	891	1-170 406-723 864-2386
HBCJL35	40	1300785	AL158846	892	1-46 101-334
HBGNC72	42	892131	AC016588	893	1-67 319-423 3335-3462 3594-3680 4721-5143 5551-6677
HBHAA81	43	846465	AC006059	894	1-230 1619-1699 1953-2090 2986-3054 3665-3786 3902-4406 4457-4674 5129-5531 5660-5811 5934-5969 7563-7959 8086-9195 9591-9735 9788-10149
HBHAA81	43	846465	AC018471	895	1-230 1619-1699 1965-2090 2986-3054 3665-3786 3902-4405 4456-4673 5128-5530 5659-5810 5933-5968 7561-7957 8084-9193 9589-9733 9786-10146
HBHAA81	43	846465	AC006059	896	1-340 501-802
HBHAA81	43	846465	AC006059	897	1-661 1538-1684 3489-3680 3832-3933 4241-4410 5782-5872

					5998-6150
HBHAA81	43	846465	AC018471	898	1-661 1539-1672
HBHAA81	43	846465	AC018471	899	1-340 501-802
HBJAB02	46	837309	AC015651	900	1-35 159-252 410-783 786-830 953-1035 1452-1553 1651-2071 2161-2264 2352-2454 2494-2758 2847-3006 3135-3272 3477-4138 4907-5738 5972-6059 6132-6367 6650-6834 6915-7010 7091-7658 7662-9457 10122-10222 11415-11534 12386-12418 13253-13584 13635-13867 14881-15326 15851-16013 16529-16816 17430-17529 18140-18269 18634-18734 19189-19369 20434-21105 21912-22008
HBJAB02	46	837309	AC015651	901	1-2097 5308-5495 5696-5742 5890-6249 7370-7525 7850-8236 8359-8463 8597-8770 8919-9028 9213-9353 9517-9639 9765-9874 9944-11023 11124-11219 11315-11613

					11708-12241 12431-12666 12744-12802 12976-13087 13374-13914 14728-15500
HBMBM96	53	561935	AP000786	902	1-1121
HBMBM96	53	561935	AP000786	903	1-192
HBMBX01	54	705047	AC004236	904	1-2981
HBMBX01	54	705047	AL354986	905	1-2981
HBMBX01	54	705047	AC025145	906	1-2981
HBMBX01	54	705047	AC004236	907	1-537
HBMBX01	54	705047	AC004236	908	1-334
HBMBX01	54	705047	AL354986	909	1-334
HBMBX01	54	705047	AL354986	910	1-537
HBMBX01	54	705047	AC025145	911	1-537
HBMBX01	54	705047	AC025145	912	1-328
HBMWE61	57	778066	AL049732	913	1-248 1363-1656 1738-2707 3831-3892 4148-4228 4752-4846 5021-5344 5573-5654 5744-6267 6828-6945 7178-10598
HBMWE61	57	778066	AL049732	914	1-829 3610-3658 3665-4981 12571-14809
HBNBJ76	59	810332	AC004453	915	1-3544
HBNBJ76	59	810332	AC004453	916	1-309
HBNBJ76	59	810332	AC004453	917	1-468
HBSAK32	61	856387	AL161656	918	1-325 363-460 507-980 1258-1440 1691-2081 2107-2347 2442-2595 2622-3125 3993-4605 4876-5153 5309-5877
HBSAK32	61	856387	AL161656	919	1-186 511-636
HBXCM66	62	639039	AC011962	920	1-102
HCE2H52	65	847007	AC022833	921	1-1271
HCE3B04	66	831151	AC021883	922	1-2450
HCE3B04	66	831151	AC021883	923	1-466
HCE5F78	67	838101	AC007318	924	1-1782
HCE5F78	67	838101	AC007318	925	1-98

HCEEE79	68	560609	AC006923	926	1-1044
HCEEE79	68	560609	AC006923	927	1-207
HCEEU18	70	688041	AC008469	928	1-169
HCEEU18	70	688041	AC026400	929	1-170
HCEEU18	70	688041	AC008469	930	1-304 420-602 1427-2108 2323-2645 3613-3987 4129-4442 4600-4731 4868-5039 5408-5538 5624-5776 6317-7734
HCEEU18	70	688041	AC008469	931	1-294
HCEEU18	70	688041	AC026400	932	1-98
HCEEU18	70	688041	AC026400	933	1-407
HCEGG08	72	844506	AC078898	934	1-640
HCEGG08	72	844506	AC074196	935	1-606
HCEGG08	72	844506	AC077693	936	1-628
HCEGG08	72	844506	AC027037	937	1-640
HCEGG08	72	844506	AC026757	938	1-513
HCEGG08	72	844506	AC027036	939	1-612
HCEGG08	72	844506	AC074108	940	1-462
HCEGG08	72	844506	AC074226	941	1-640
HCEGG08	72	844506	AC073166	942	1-640
HCEGG08	72	844506	AC068667	943	1-654
HCEGG08	72	844506	AC024594	944	1-414
HCEGG08	72	844506	AC024261	945	1-647
HCEGG08	72	844506	AC078893	946	1-640
HCEGG08	72	844506	AC073555	947	1-640
HCEGG08	72	844506	AC069474	948	1-571
HCEGG08	72	844506	AC068924	949	1-640
HCEGG08	72	844506	AC066689	950	1-639
HCEGG08	72	844506	AC035249	951	1-397
HCEGG08	72	844506	AC034258	952	1-648
HCEGG08	72	844506	AC027135	953	1-434
HCEGG08	72	844506	AC027035	954	1-624
HCEGG08	72	844506	AC027034	955	1-509
HCEGG08	72	844506	AC026815	956	1-654
HCEGG08	72	844506	AC025781	957	1-546
HCEGG08	72	844506	AC078894	958	1-654
HCFLN88	73	610000	AC005089	959	1-594 1779-2065 2224-2411 3295-3588 3962-4463 5317-5561 5835-6210 6750-7793
HCFLN88	73	610000	AC005089	960	1-141
HCFLN88	73	610000	AC005089	961	1-215

HCQCM24	75	845070	AC024969	962	1-3278
HCQCM24	75	845070	AC026833	963	1-3270
HCQCM24	75	845070	AC024969	964	1-339
HCQCM24	75	845070	AC026833	965	1-339
HCRBF72	77	828945	AL031731	966	1-228 470-762 793-916 1138-1283 2101-2241 3646-3723 4316-4418 5123-5221 5531-5609 6090-6192 6447-6790
HCRBF72	77	828945	AL031731	967	1-742 941-1493 1926-2063 2330-2427 2939-3397 3456-3806 4127-4407 5411-5701 5758-5887 6247-6369 6418-6967 8694-8799 8827-8931 8973-9140 10098-10228 11027-11789 12063-13656 14974-15080 15481-15672 15724-15921 16055-16089 17154-17467 17730-17886 18256-18550 18657-18902
HCUCF89	80	637986	AC022554	968	1-1066
HCUCF89	80	637986	AC022554	969	1-692
HCUCF89	80	637986	AC022554	970	1-643
HCUCK44	81	790277	AC007842	971	1-1118
HCUCK44	81	790277	AC007842	972	1-415
HCUCK44	81	790277	AC007842	973	1-101
HCWAE64	83	535893	AL157935	974	1-1319 2024-2316 2937-2984 3126-3281 5595-5703 5788-6574 6667-6733 6788-6880



					6962-7303 8111-11869 12019-12418 12420-12679 13140-13191
HCWAE64	83	535893	AL157935	975	1-1316
HCWAE64	83	535893	AL157935	976	1-309
HCWFU39	84	651316	AP000427	977	1-2086 2209-2777 3392-4040 5819-5959
HCWUL09	85	834722	AL138741	978	1-755
HCWUL09	85	834722	AL138741	979	1-555
HDHAA42	86	695710	AC069193	980	1-1213
HDHAA42	86	695710	AL049629	981	1-1213
HDHAA42	86	695710	AC069193	982	1-807
HDHAA42	86	695710	AL049629	983	1-807
HDHAA42	86	695710	AL049629	984	1-129
HDPDI72	89	897277	AL139238	985	1-76 3170-3542 4724-5613 6598-6719 6954-7373 8256-8349 10408-11003
HDPDI72	89	897277	AL139238	986	1-279
HDPFF10	91	853513	AC023797	987	1-120 135-715 1005-1364 1715-2180 2566-2672 3355-3621 3641-4033 4196-4285 5100-7482
HDPFF10	91	853513	AC023797	988	1-463
HDPFY18	93	779450	AC011875	989	1-1880
HDPFY18	93	779450	AP000848	990	1-1470
HDPFY18	93	779450	AP000663	991	1-3332
HDPOO76	97	838594	AC006483	992	1-109 132-434 604-3482
HDPOO76	97	838594	AC026717	993	1-1820
HDPOO76	97	838594	AC035147	994	1-1820
HDPOO76	97	838594	AC026692	995	1-1823
HDPOO76	97	838594	AC073481	996	1-2558
HDPOO76	97	838594	AC006483	997	1-216
HDPOO76	97	838594	AC006483	998	1-231
HDPOO76	97	838594	AC073481	999	1-231
HDPXN20	100	801896	AP001810	1000	1-4481
HDPXN20	100	801896	AP001649	1001	1-4481
HDPXN20	100	801896	AC021331	1002	1-4481
HDPXN20	100	801896	AP001810	1003	1-363

HDPXN20	100	801896	AP001649	1004	1-363
HDPXN20	100	801896	AC021331	1005	1-363
HDTAV54	102	801898	AC073342	1006	1-164 208-280 349-1975 1978-2434 2614-2946 4135-9074 9200-9507
HDTAV54	102	801898	AC073342	1007	1-434
HDTGW48	103	827285	AL138804	1008	1-44 712-839 1107-2515 2854-3189 3388-3704 3951-4245 4737-4829 5674-6404 7604-8233 8818-9303
HDTGW48	103	827285	AL138804	1009	1-391
HDTGW48	103	827285	AL138804	1010	1-87 821-1093
HDTLM18	104	836057	AL049843	1011	1-148 811-1104 2196-2793 2930-2991 3921-4047 6575-6627 8124-8659 8741-8843 9448-9886 10480-10524 10944-11103 13917-14450 14801-15344 16392-17295 18110-18311 20445-21421 21596-22268 23857-23968 24205-24585 24623-24701 25168-25575 28078-28391 28548-28707 29039-29839 30732-31495 32024-32487 32521-33216 34511-34647 35166-35720 36527-36797 36993-37125

					38178-38288 39341-39646 41511-41570 42307-42873 42914-43014 43248-43465 43589-43690 43724-43909 44170-44333 44517-45130 45497-45961 46215-46842 47926-48126 49391-51961
HDTLM18	104	836057	AL049843	1012	1-2071
HDTLM18	104	836057	AL049843	1013	1-76 2590-2720 4185-4370 7052-7178 7385-7428
HE2CH58	105	838140	AC006333	1014	1-1938
HE2CH58	105	838140	AC027585	1015	1-2368
HE2CH58	105	838140	AC006333	1016	1-430
HE2PO93	106	771655	AC020894	1017	1-353 749-1198 2724-2986 4932-5578 7481-7617 8108-8257 8515-8849 9840-9968 10287-10827 11376-14474 14652-15073 15510-17083 17304-20501
HE2PO93	106	771655	AC008590	1018	1-648 2551-2687 3178-3327 3585-3919 4910-5038 5357-5897 6446-10147 10584-12159 12380-15574
HE2PO93	106	771655	AC021468	1019	1-353 749-1198 2724-2986 4934-5579 7482-7618 8109-8258 8516-8850 9841-9969 10288-10828

					11377-13627 13631-13748 13762-15078 15515-17088 17309-20507
HE2PO93	106	771655	AC020894	1020	1-372
HE2PO93	106	771655	AC020894	1021	1-315 893-1242
HE2PO93	106	771655	AC021468	1022	1-350
HE2PO93	106	771655	AC021468	1023	1-372
HE6DO92	109	562767	AC007276	1024	1-946
HE6DO92	109	562767	AC074010	1025	1-946
HE6DO92	109	562767	AC007276	1026	1-405
HE6DO92	109	562767	AC074010	1027	1-405
HE6EY13	110	847058	AC003688	1028	1-449 4037-4176 4301-4366 4461-4586 4781-4860 5274-5391 5498-5619 6604-6940 7008-7096 7103-8056
HE6EY13	110	847058	AC011022	1029	1-1405
HE6EY13	110	847058	AC023963	1030	1-1333
HE6EY13	110	847058	AC003688	1031	1-931 983-1131 1504-2295
HE6EY13	110	847058	AC003688	1032	1-286
HE6EY13	110	847058	AC011022	1033	1-274
HE6EY13	110	847058	AC023963	1034	1-274
HE8BQ49	111	589443	AC009225	1035	1-1857
HE8SG96	112	862016	AL138707	1036	1-152 684-1297 1697-3720 4478-6193
HE8SG96	112	862016	AL138707	1037	1-336
HEBCI18	116	831464	AC013399	1038	1-3602
HEBCI18	116	831464	AC013399	1039	1-651
HEBDF77	117	692347	AL078460	1040	1-1933
HEBDF77	117	692347	AL078460	1041	1-269
HEBDF77	117	692347	AL078460	1042	1-176
HEBDQ91	118	840288	AC008623	1043	1-2883
HEBDQ91	118	840288	AC008623	1044	1-350
HEBDQ91	118	840288	AC008623	1045	1-555
HEBFR46	119	847064	AC006483	1046	1-70 282-644 789-4243
HEBFR46	119	847064	AC073481	1047	1-2167 2174-3461
HEBFR46	119	847064	AC006483	1048	1-344
HEBFR46	119	847064	AC006483	1049	1-195

HEBGE07	120	798096	AC021918	1050	1-1899
HEBGE07	120	798096	AC021918	1051	1-225
HELAT35	121	693175	AC008880	1052	1-2115
HELAT35	121	693175	AC016613	1053	1-2115
HELBUS4	122	637624	AC011004	1054	1-1736
HELBUS4	122	637624	AC011004	1055	1-404
HELBUS4	122	637624	AC011004	1056	1-104
HEMEY47	123	834491	AL133240	1057	1-144 3483-4002 4138-4196 4835-5233 8422-9149 10684-10795 11255-11435 12025-12186 12266-12376 13381-13513 14514-14661 16248-16363 17221-17433 18618-18721 20181-20371 21019-21314 22519-22957 24380-25014 25275-25783 29344-29462 30160-30257 32036-32474 33138-34013 34369-35308 35672-35908 36996-37299 39125-39261 39667-43056
HEMEY47	123	834491	AL121773	1058	1-144 3483-4002 4138-4196 4835-5233 8422-9149 11252-11432 12022-12183 12263-12373 13378-13510 14511-14658 16245-16360 17218-17348 17358-17438 20176-20366 21014-21309 22514-22952 24263-25009 25270-25778 29339-29457

					30154-30263 32033-32471 33135-34010 34366-35305 35669-35905 36993-37296 39122-39258 39664-43053
HEMEY47	123	834491	AL133240	1059	1-667
HEMEY47	123	834491	AL133240	1060	1-120 216-786 890-1198 1376-1780 2002-2592 2730-2848 3192-4374 4397-4612 4988-5825
HEMEY47	123	834491	AL121773	1061	1-120 215-785 889-1197 1375-1779 2001-2591 2729-2847 3191-4373 4396-4611 4998-5824
HEMEY47	123	834491	AL121773	1062	1-667
HEPBA14	125	855935	AC027590	1063	1-700 959-1716
HEPBA14	125	855935	AC027590	1064	1-491
HETey67	128	704077	AL133477	1065	1-89 107-4333
HETey67	128	704077	AL353578	1066	1-89 107-2184
HETey67	128	704077	AL133477	1067	1-110 140-243 918-1001 2463-2748 3495-3652
HETey67	128	704077	AL353578	1068	1-152
HFCDW95	129	847383	AC006388	1069	1-3484
HFCDW95	129	847383	AC006388	1070	1-1218
HFCDW95	129	847383	AC006388	1071	1-158
HFEAY59	131	658685	AC005919	1072	1-490 976-1063 1264-1351 1663-1956 2076-2238 2674-2837 2910-3034 4517-4686 4804-5021 5234-5282

					5397-5729 7103-7442
HFEAY59	131	658685	AC005919	1073	1-155
HFGAJ16	133	580824	U52111	1074	1-208 332-897 1117-1259 3436-3539 8714-8869 9007-9519 9960-10222 10562-10787 11193-11396 12116-12416 12475-12631 17840-18308 20205-20451 21348-21594 22043-22408 23431-23917
HFGAJ16	133	580824	AC002041	1075	1-254 1127-1340 1821-2184 2518-3152 3214-3699
HFGAJ16	133	580824	AC009057	1076	1-254 1127-1340 1821-2184 2518-3152 3214-3699
HFGAJ16	133	580824	U52111	1077	1-457 529-1204
HFGAJ16	133	580824	AC002041	1078	1-469
HFGAJ16	133	580824	AC009057	1079	1-469
HFIJA29	135	839206	AL031259	1080	1-1291 1460-2067 2069-2908 3053-3754 4093-4182 4546-4650 5612-6170 6932-9872
HFIJA29	135	839206	AC009954	1081	1-1294 1463-2070 2072-2911 3056-3757 4096-4185 4549-4653 5614-6172 6935-9878
HFIJA29	135	839206	AL031259	1082	1-426
HFIJA29	135	839206	AL031259	1083	1-829 1325-1871 2204-2663 3085-3251

					4136-4238 4289-4388 4564-4997 5413-5945 8022-8401 8405-8923 10401-10602 10628-11074 15099-15200 15346-15984 18400-18491
HFIJA29	135	839206	AC009954	1084	1-829 1325-1871 2204-2663 3087-3253 4262-4399 4571-5004 5420-5952 8016-8395 8399-8917 10395-10596 10622-11056 15325-15963 18377-18495
HFIJA29	135	839206	AC009954	1085	1-426
HFIJA68	136	847074	AC010550	1086	1-127
HFKEU12	138	634006	AC010443	1087	1-1026
HFKEU12	138	634006	AC021087	1088	1-1026
HFKEU12	138	634006	AC027825	1089	1-1026
HFKEU12	138	634006	AC027825	1090	1-263
HFKFX64	139	566835	AP001203	1091	1-870
HFKFX64	139	566835	AC025291	1092	1-868
HFKFX64	139	566835	AC010798	1093	1-868
HFKFX64	139	566835	AP001203	1094	1-750
HFKFX64	139	566835	AC025291	1095	1-750
HFKFX64	139	566835	AC010798	1096	1-750
HFPDS07	140	821646	AC067945	1097	1-3965
HFPDS07	140	821646	AC067945	1098	1-814
HFPDS07	140	821646	AC067945	1099	1-743
HFRAB10	141	745380	AC067763	1100	1-2395
HFRAB10	141	745380	AC012263	1101	1-2395
HFRAB10	141	745380	AC067763	1102	1-125
HFRAB10	141	745380	AC012263	1103	1-125
HFRAB10	141	745380	AC012263	1104	1-622
HFVGK35	143	731868	AC018362	1105	1-49 463-1004 2131-2239 2799-3339 3639-3668 3679-6187 7308-7451 7701-7829 8065-8968
HFXBT66	145	580831	AL162497	1106	1-955



HFXBT66	145	580831	AL162497	1107	1-479
HGBER72	147	826710	AL157935	1108	1-1319 2024-2316 2937-2984 3126-3281 5595-5703 5788-6574 6667-6733 6788-6880 6962-7303 8111-11869 12019-12418 12420-12679 13140-13191
HGBER72	147	826710	AL157935	1109	1-1316
HGBER72	147	826710	AL157935	1110	1-309
HGLBG15	150	701990	AC005082	1111	1-252 2150-2418 2461-2695 2700-3101 3368-3776 6066-6250 7105-7363 8329-9740
HGLBG15	150	701990	AC073992	1112	1-259 1225-2636
HGLBG15	150	701990	AC005082	1113	1-546
HGLBG15	150	701990	AC073992	1114	1-282
HHEGS55	151	858372	AC009679	1115	1-565
HHEGS55	151	858372	AC016824	1116	1-902
HHFEC39	153	609873	AL022726	1117	1-819 1137-4813
HHFEC39	153	609873	AL022726	1118	1-509
HHFFS40	156	824059	AC022423	1119	1-2017
HHFFS40	156	824059	AC025178	1120	1-2017
HHFFS40	156	824059	AC022444	1121	1-2017
HHGDT26	158	658692	AC010754	1122	1-1584
HHGDT26	158	658692	AC016127	1123	1-1584 1639-1876
HHGDT26	158	658692	AC023989	1124	1-1584 1639-1876
HHPFU28	159	824573	AC069200	1125	1-2595
HHPFU28	159	824573	AC069200	1126	1-3998
HHPFU28	159	824573	AC069200	1127	1-777
HHSBI65	160	801910	AF205589	1128	1-1703 1798-2217 2302-3089
HHSBI65	160	801910	AF205589	1129	1-531 571-1759 1862-2104 2219-2722
HHSDI53	161	862028	AP001456	1130	1-1611 1654-2020 2187-2263

HHSDI53	161	862028	AL109936	1131	1-1611 1654-2020 2186-2322 2673-3243 3291-3857 4276-4892 5002-5380 8185-8499 8705-8842 10146-10298 12526-12652 12780-14327
HHSDI53	161	862028	AP001456	1132	1-482
HHSDI53	161	862028	AL109936	1133	1-188
HHSGL28	163	801912	AC024242	1134	1-2154
HHSGL28	163	801912	AC020584	1135	1-215 233-1205
HHSGL28	163	801912	AC024242	1136	1-216 952-1969
HHSGL28	163	801912	AC020584	1137	1-635
HISBA38	164	561711	AL137020	1138	1-1169
HISBA38	164	561711	AL359254	1139	1-1169
HISBA38	164	561711	AL137020	1140	1-702
HISBA38	164	561711	AL359254	1141	1-702
HJMAV41	166	862029	AC008998	1142	1-239 975-1119 1204-1298 3076-3230 4100-4205 5256-5376 5476-5596 6626-6943 7508-8143
HJPCH08	170	840365	AC004826	1143	1-71 475-867 2289-2390 2475-2596 3191-3333 3458-3644 3729-3859 4038-4233 4338-4451 4558-4626 4832-4977 5108-5272 5380-5622 5698-5816 5965-6067 6380-6580 6829-6920 7162-7299 7943-10018 10503-10623 10699-10776

					10917-11336 12343-12406 12731-13275
HJPCH08	170	840365	AC004826	1144	1-406 862-1119 1423-1689 2886-2989 5361-5431 5969-6059 6874-7181 9823-9980 10928-11194 12667-12838 17063-18165 18168-18649 18785-19579 19733-19780 20247-20355 21063-21415 21546-22630 23320-23541 24276-24323 24510-24602 24903-25357 26015-27115 27309-28272 28601-28879 29413-29552 30539-30602 30728-31110 31231-31353 32257-32325 33895-34173 35081-35392 37763-37860 38789-38822 38920-39119
HJPCH08	170	840365	AC004826	1145	1-424 2065-2241
HKACI79	172	853361	AC006512	1146	1-658 3090-3543 4479-5105 5885-6846 7103-9707 9914-10293 11523-12034 12067-12181 13769-14031 14199-14291 14584-14790 15123-15154 17039-17482 17539-17987 18697-19052 19112-19380

					20023-20268 21158-21598 21817-22221 23565-23665 23906-24076 24981-25506 25510-25861 25981-26645 26661-27449 27717-27812 27991-28024 28437-28888 29651-33442 33621-34089 34245-34808 34819-35284 35854-35960 38525-38771
HKACI79	172	853361	AC011841	1147	1-710 902-1864 1997-2121 2334-3824 4232-5905
HKACI79	172	853361	AC011043	1148	1-712 904-1867 1874-1906 2000-2124 2337-3891
HKACI79	172	853361	AC078939	1149	1-646 837-1797 1804-1836 1930-3820 4161-5834
HKACI79	172	853361	AC006512	1150	1-315 439-531 707-1080 1144-1227 1491-1845 2113-2321 2700-3556 3818-4307 4336-4813 4958-5775
HKACI79	172	853361	AC006512	1151	1-738
HKACI79	172	853361	AC011841	1152	1-541
HKACI79	172	853361	AC011841	1153	1-105
HKACI79	172	853361	AC011043	1154	1-105
HKACI79	172	853361	AC078939	1155	1-564
HKACI79	172	853361	AC078939	1156	1-105
HKGBF25	174	738797	AL390999	1157	1-1996
HKGBF25	174	738797	AC012079	1158	1-1997
HKMLK03	175	734213	AC007014	1159	1-1463
HKMLK03	175	734213	AC007493	1160	1-1439
HKMLK03	175	734213	AC007014	1161	1-205

HKMLK03	175	734213	AC007014	1162	1-509
HKMLM95	176	840367	AC006372	1163	1-1625
HKMLM95	176	840367	AC006372	1164	1-764
HKMLM95	176	840367	AC006372	1165	1-259
HLDBG17	177	855953	AL161798	1166	1-1403
HLDCA54	178	842190	AL135791	1167	1-109 1747-2145 4610-5526 5738-7029 7185-8965
HLDCA54	178	842190	AF205588	1168	1-109 1741-2139 4606-5522 5734-7025 7181-8960
HLDCA54	178	842190	AL390779	1169	1-917 1129-2420 2576-4357
HLDCA54	178	842190	AL135791	1170	1-242
HLDCA54	178	842190	AF205588	1171	1-242
HLDCA54	178	842190	AL390779	1172	1-242
HLHAP05	181	638476	AC009097	1173	1-101
HLHCS23	182	560663	AL356385	1174	1-1419
HLHCS23	182	560663	AC016501	1175	1-1419
HLHCS23	182	560663	AL356385	1176	1-560
HLHCS23	182	560663	AC016501	1177	1-560
HLICO10	185	658740	AL031685	1178	1-165 1532-2565 2618-3686 4070-4320 4665-5083 5172-5547 5902-6305 7276-9100 9742-9863 10008-10531 11381-11716 12759-13260 15686-17570
HLICO10	185	658740	AL031685	1179	1-182
HLICO10	185	658740	AL031685	1180	1-113
HLJBS28	186	658742	AC026779	1181	1-78 2390-2473 5457-7057
HLJBS28	186	658742	AC008482	1182	1-93 1668-1990 3077-4682
HLJBS28	186	658742	AC026779	1183	1-651
HLJBS28	186	658742	AC008482	1184	1-807
HLMBW89	187	701996	AC000378	1185	1-58 638-973 1260-1369 2693-4145 4457-5771

					6287-6925 6952-7375 7728-8216 9647-12604
HLMBW89	187	701996	AC026957	1186	1-887 1199-2410 2513-2977
HLMBW89	187	701996	AC026458	1187	1-222 1116-1198 1311-1421 1946-2070 3553-3703 4985-5195 5609-5700 6069-6182 6316-7356 7445-7513 7568-7845 7913-7973 8815-9222 10511-11963 12275-13965 14045-14129
HLMBW89	187	701996	AF165423	1188	1-58 1007-1411 2729-3447 3684-4144 4496-6259 6397-6480
HLMBW89	187	701996	AC000378	1189	1-931
HLMBW89	187	701996	AC000378	1190	1-1510
HLMBW89	187	701996	AC026957	1191	1-313
HLMBW89	187	701996	AF165423	1192	1-69 124-401
HLMGP50	188	647603	AC019101	1193	1-1039
HLMGP50	188	647603	AC019101	1194	1-100
HLMJB64	189	658699	AL034550	1195	1-107 122-1264 1513-4478
HLMJB64	189	658699	AL034550	1196	1-147 445-569 1012-1217 5637-5681
HLQCL64	191	864966	AC066616	1197	1-96 1004-1330 1800-1928 3574-4344 4494-5134 6013-6287 8957-9700 9966-12796
HLQCL64	191	864966	AC016050	1198	1-96 1004-1330 1800-1928

					3580-4350 4500-5140 6019-6293 8963-9706 9972-12801
HLQCL64	191	864966	AC066616	1199	1-336
HLQCL64	191	864966	AC016050	1200	1-336
HLWBB73	193	740757	AL117352	1201	1-123 1745-1979 2193-2318 3405-3541 5983-6429 6462-6536 6985-7400 7630-10558
HLWBB73	193	740757	AL358784	1202	1-123 1743-1977 2191-2316 3403-3539 5981-6427 6460-6534 6983-7398 7627-10554
HLWBB73	193	740757	AC011945	1203	1-2915
HLWBB73	193	740757	AL117352	1204	1-1016
HLWBB73	193	740757	AL358784	1205	1-1016
HLWBB73	193	740757	AC011945	1206	1-416
HLWBB73	193	740757	AC011945	1207	1-1016
HLYEU59	195	582084	AC024338	1208	1-1121
HLYEU59	195	582084	AC023270	1209	1-1121
HLYEU59	195	582084	AC024338	1210	1-498
HLYEU59	195	582084	AC023270	1211	1-498
HLYGE16	197	651339	AC025594	1212	1-272 301-388 531-1439 1461-3200
HLYGE16	197	651339	AC073849	1213	1-272 301-388 531-1439 1461-3200
HLYGE16	197	651339	AC025594	1214	1-337
HLYGE16	197	651339	AC073849	1215	1-337
HMC6H60	199	654853	AL122034	1216	1-785 1072-3055
HMC6H60	199	654853	AC073394	1217	1-326 1898-2079 2460-2702 4498-4586 5598-7296 7560-7669 8015-8460 8479-8539 8918-9242 10451-10975

					13375-13521 13561-15769 16055-18038
HMCFH60	199	654853	AL160264	1218	1-86 1101-2799 3063-3172 3518-3963 3982-4042 4421-4745 5954-6478 8877-9023 9063-11271 11557-13540
HMCFH60	199	654853	AC073394	1219	1-309
HMCFH60	199	654853	AC073394	1220	1-577
HMDAB29	200	584789	AC027264	1221	1-147
HMDAB29	200	584789	AC068682	1222	1-153
HMDAB29	200	584789	AL354887	1223	1-1433
HMDAB29	200	584789	AL157408	1224	1-1434
HMDAB29	200	584789	AL354887	1225	1-577
HMDAB29	200	584789	AL354887	1226	1-196
HMDAB29	200	584789	AL157408	1227	1-577
HMDAB29	200	584789	AL157408	1228	1-196
HMDAD44	201	566854	AC012370	1229	1-145 2813-4454
HMDAD44	201	566854	AC034121	1230	1-1569
HMDAD44	201	566854	AC012370	1231	1-787
HMDAD44	201	566854	AC012370	1232	1-622
HMEDE24	203	837027	AC011078	1233	1-297 359-416 3247-3653 6083-6236 9753-10036 11128-11233 12148-12514 12635-13141 15604-16463 19071-19190 19476-20232 20321-20638 21200-21594 21959-22219 23120-23362 23467-24143 24766-24853 25725-26143 26310-26455 27545-30619 30708-31169
HMELM75	204	587307	AL138846	1234	1-304 423-553 1434-2199 3430-3470 6425-6910



					7169-7453 7726-8594 8716-9187 9274-9340 10220-10323 10333-10484 10770-10868 12169-12276 12626-12744 12959-13087 13628-13739 14496-14592 15842-17239
HMELM75	204	587307	AC023225	1235	1-63 949-1052 1062-1217 1500-1598 2892-2999 3350-3468 3685-3811 4351-4478 5217-5305 6563-7960
HMELM75	204	587307	AL138846	1236	1-442
HMELM75	204	587307	AL138846	1237	1-638
HMELM75	204	587307	AC023225	1238	1-472
HMELM75	204	587307	AC023225	1239	1-638
HMIK10	205	562774	AP000817	1240	1-1044
HMIK10	205	562774	AC024177	1241	1-1047
HMIK10	205	562774	AC011009	1242	1-1047
HMIBD93	206	634227	AC010913	1243	1-3640
HMIBD93	206	634227	AC010913	1244	1-495 593-668 670-1055 1578-1799 2445-2717 3103-3203 3284-3751 3841-4032 5093-5261 5443-5872 5922-6838 7633-8170 8304-8491 8968-9029 9888-10020 10479-10733 10807-10958 11020-11132 12080-12373 12464-12585 13223-13381 17379-17471 18572-19447

HMIBF07	207	603528	AC022833	1245	1-1721
HMICP65	208	847403	AL162741	1246	1-45
HMICP65	208	847403	AL162741	1247	1-102
HMSHU20	213	847410	AL354889	1248	1-43 642-699 1506-4529
HMSHU20	213	847410	AL161660	1249	1-3030
HMSHU20	213	847410	AL354889	1250	1-713
HMSHU20	213	847410	AL161660	1251	1-1063
HMWJF53	218	758158	AC021016	1252	1-739 792-852 1482-1572 1670-4387
HMWJF53	218	758158	AC021016	1253	1-276
HNEAK81	219	722235	AL122015	1254	1-1226
HNECL22	220	799541	AF216674	1255	1-2837
HNECL22	220	799541	AC051642	1256	1-2201
HNECL22	220	799541	AF216674	1257	1-462
HNECL22	220	799541	AF216674	1258	1-836
HNECL22	220	799541	AC051642	1259	1-462
HNECW49	221	639117	AC011864	1260	1-522
HNECW49	221	639117	AC011864	1261	1-607
HNECW49	221	639117	AC011864	1262	1-741
HNFHF34	224	722237	AL356273	1263	1-166 514-644 1028-1685 1982-3144 3435-4099 4640-4876 5013-5854 5857-6266 6404-6685 7094-7657 7772-7976 8288-8547 8731-9316 9327-11445
HNFHF34	224	722237	AL356273	1264	1-535
HNFHF34	224	722237	AL356273	1265	1-197
HNGAM58	225	688114	AP000023	1266	1-104 106-313
HNGAM58	225	688114	AL353625	1267	1-1881 2735-2808 3883-4043 5519-5602 5702-5845 6903-7175 9926-10120 11625-12238 12343-12673 12887-13212 13309-13473 13482-13691 14962-15187

					15799-16641 17298-17447 18403-18517 21404-21557 22366-22603 22625-23551 25581-25730 26277-26682 26765-26975 28188-28352 30552-30705 32576-32797 33083-33326 33654-33791 34515-34643 36494-36685 37580-37916 38168-38308 38903-39515 41650-41749 42020-42153 42920-43144 43218-43346 43937-44019 44180-44379 44623-44800 44905-45050 45835-46036 47456-47567
HNGAM58	225	688114	AL136325	1268	1-308
HNGAM58	225	688114	AL078472	1269	1-114 116-323
HNGAM58	225	688114	AL049776	1270	1-229 1654-1686 1809-1912 3738-4062
HNGAM58	225	688114	AL031176	1271	1-310
HNGAM58	225	688114	AL022329	1272	1-255
HNGAM58	225	688114	AL022302	1273	1-97 591-698 4315-4635
HNGAM58	225	688114	AF111169	1274	1-287
HNGAM58	225	688114	AF001550	1275	1-313
HNGAM58	225	688114	AC009303	1276	1-320 5298-5444 5797-6110
HNGAM58	225	688114	AC008958	1277	1-300 1024-1341 2289-2604
HNGAM58	225	688114	AC008554	1278	1-306
HNGAM58	225	688114	AC008101	1279	1-115 165-466 966-1404 1633-1705

					1926-2060 3344-3376 3578-3674 3887-4181 6025-6290 10101-10428 10551-10654 11804-11921 12916-13092 14481-14684 15589-15954 16784-17082 17091-17304 18309-18919 19343-19668 20553-20853 25924-26171 26200-26512 27209-27666
HNGAM58	225	688114	AC008079	1280	1-627 2228-2466 3557-3606 4115-4251 4459-4879 5931-6271 6478-6648 7457-7555 9361-9509 9666-9964 10062-10151 12863-13276 13550-13664 13714-14020 14515-14953 15183-15255 15463-15610 16895-16927 17129-17225 17423-17724 19577-19842 23640-23967 24090-24252 26455-26631 29128-29493 30323-30621 30630-30843 31848-32458 32882-33207 34093-34392 39463-39710 39737-40052 40755-41206
HNGAM58	225	688114	AC008008	1281	1-315
HNGAM58	225	688114	AC007666	1282	1-299

HNGAM58	225	688114	AC007619	1283	1-211
HNGAM58	225	688114	AC007324	1284	1-299
HNGAM58	225	688114	AC006965	1285	1-174
HNGAM58	225	688114	AC006946	1286	1-308
HNGAM58	225	688114	AC006548	1287	1-308
HNGAM58	225	688114	AC005846	1288	1-465
HNGAM58	225	688114	AC005598	1289	1-318
HNGAM58	225	688114	AC005594	1290	1-1731 2759-3460 4610-4721 6663-6905 7470-7615 7961-8099 8133-8446 9437-9675 10398-10546 11600-11958 12691-12876 13531-13671 14345-14499 15652-15734 17947-18305 18918-19598 20151-20330 22326-22428
HNGAM58	225	688114	AC005342	1291	1-210
HNGAM58	225	688114	AC005221	1292	1-737
HNGAM58	225	688114	AC004477	1293	1-138
HNGAM58	225	688114	AC004460	1294	1-290 747-4223 4433-4702
HNGAM58	225	688114	AC004019	1295	1-299
HNGAM58	225	688114	AC002519	1296	1-295
HNGAM58	225	688114	AC002476	1297	1-40 4020-4364
HNGAM58	225	688114	AC073220	1298	1-311 766-4242 4507-4721
HNGAM58	225	688114	AC019126	1299	1-1000 1425-1500 3144-3288 4770-5081 5584-5635
HNGAM58	225	688114	AC016772	1300	1-209
HNGAM58	225	688114	AC015804	1301	1-139
HNGAM58	225	688114	AC007194	1302	1-108
HNGAM58	225	688114	AC011740	1303	1-138
HNGAM58	225	688114	AL138740	1304	1-323
HNGAM58	225	688114	AL135839	1305	1-115 161-358
HNGAM58	225	688114	AC022148	1306	1-427
HNGAM58	225	688114	Z82199	1307	1-549
HNGAM58	225	688114	AJ239319	1308	1-335 1031-1609

					1922-2102 4742-4918 4925-5059
HNGAM58	225	688114	AC023221	1309	1-129
HNGAM58	225	688114	AC011994	1310	1-1939
HNGAM58	225	688114	AC011330	1311	1-139
HNGAM58	225	688114	AL121956	1312	1-1881 2735-2808 3883-4043 5519-5602 5702-5845 6903-7175 9926-10120 11625-12238 12343-12673 12887-13212 13309-13473 13482-13691 14962-15187 15799-16641 17298-17447 18403-18517 21404-21557 22366-22603 22625-23551 25581-25730 26277-26682 26765-26975 28188-28352 30552-30705 32576-32797 33083-33326 33654-33791 34515-34643 36494-36685 37580-37916 38168-38308 38903-39515 41650-41749 42020-42153 42920-43144 43218-43346 43937-44019 44180-44379 44623-44800 44905-45050 45835-46036 47456-47567
HNGAM58	225	688114	AL354950	1313	1-141
HNGAM58	225	688114	AL160471	1314	1-803 1156-1259 3445-3580 3733-3821 8085-13120

					13277-13410 14706-14802 16142-16310 16698-16741 17373-17479 20963-21108 21604-21661 21848-21963 22062-22282 22767-22904 28319-28430 31284-31384 34181-34362 35804-36251 38170-38635 39137-39685 39978-40068 40645-41002 41212-41423 43834-43966 46252-46498 47334-48322 49425-49722 50320-50738 54716-54877
HNGAM58	225	688114	AC027130	1315	1-312
HNGAM58	225	688114	AC021669	1316	1-140
HNGAM58	225	688114	AC012620	1317	1-167
HNGAM58	225	688114	AC012124	1318	1-741 2154-2713 5013-5152 5488-5667
HNGAM58	225	688114	AL157832	1319	1-141
HNGAM58	225	688114	AC022454	1320	1-153
HNGAM58	225	688114	AL357518	1321	1-131
HNGAM58	225	688114	AC004971	1322	1-124 1636-1805 3545-3919 5034-5269 5857-6264 6457-6771 6927-7080 7527-7850 7906-8247
HNGAM58	225	688114	AP000023	1323	1-83
HNGAM58	225	688114	AL353625	1324	1-354
HNGAM58	225	688114	AL136325	1325	1-149
HNGAM58	225	688114	AL078472	1326	1-83
HNGAM58	225	688114	AL022329	1327	1-636
HNGAM58	225	688114	AL022302	1328	1-101
HNGAM58	225	688114	AL022302	1329	1-461
HNGAM58	225	688114	AF111169	1330	1-101
HNGAM58	225	688114	AC009303	1331	1-222
HNGAM58	225	688114	AC008958	1332	1-374

HNGAM58	225	688114	AC008554	1333	1-100
HNGAM58	225	688114	AC008101	1334	1-159
HNGAM58	225	688114	AC008079	1335	1-159
HNGAM58	225	688114	AC008079	1336	1-73 300-338 801-1164 3740-5359 5459-6041
HNGAM58	225	688114	AC008008	1337	1-656
HNGAM58	225	688114	AC007666	1338	1-90 145-413
HNGAM58	225	688114	AC007324	1339	1-214 1219-1829
HNGAM58	225	688114	AC007324	1340	1-300
HNGAM58	225	688114	AC006965	1341	1-168
HNGAM58	225	688114	AC006946	1342	1-83
HNGAM58	225	688114	AC006548	1343	1-83
HNGAM58	225	688114	AC005598	1344	1-279
HNGAM58	225	688114	AC005598	1345	1-471
HNGAM58	225	688114	AC005594	1346	1-232
HNGAM58	225	688114	AC005221	1347	1-334 1068-1453 1964-2261 2279-2734 3142-3837 3844-4120 5655-6150
HNGAM58	225	688114	AC004477	1348	1-114
HNGAM58	225	688114	AC004460	1349	1-327
HNGAM58	225	688114	AC004019	1350	1-90 145-413
HNGAM58	225	688114	AC002476	1351	1-232
HNGAM58	225	688114	AC073220	1352	1-327
HNGAM58	225	688114	AC019126	1353	1-84
HNGAM58	225	688114	AC019126	1354	1-510
HNGAM58	225	688114	AC016772	1355	1-90 270-523 1613-1654 2621-2727 4508-4585 4669-4747 5079-5131
HNGAM58	225	688114	AC016772	1356	1-554
HNGAM58	225	688114	AC015804	1357	1-456
HNGAM58	225	688114	AC015804	1358	1-157
HNGAM58	225	688114	AC011740	1359	1-382 1357-2450 4643-5158
HNGAM58	225	688114	AC011740	1360	1-125
HNGAM58	225	688114	AL135839	1361	1-87
HNGAM58	225	688114	AC022148	1362	1-780
HNGAM58	225	688114	Z82199	1363	1-1459
HNGAM58	225	688114	Z82199	1364	1-396



HNGAM58	225	688114	AJ239319	1365	1-129
HNGAM58	225	688114	AC023221	1366	1-130
HNGAM58	225	688114	AC011330	1367	1-465
HNGAM58	225	688114	AL121956	1368	1-354
HNGAM58	225	688114	AL354950	1369	1-485
HNGAM58	225	688114	AL354950	1370	1-116
HNGAM58	225	688114	AL160471	1371	1-244 834-940 969-1079 1473-1628
HNGAM58	225	688114	AL160471	1372	1-1366
HNGAM58	225	688114	AC021669	1373	1-786
HNGAM58	225	688114	AL157832	1374	1-485
HNGAM58	225	688114	AL157832	1375	1-116
HNGAM58	225	688114	AC004971	1376	1-913
HNGBH53	226	532614	AP001095	1377	1-634
HNGBH53	226	532614	AC007902	1378	1-634
HNGDX18	228	1145071	AL391069	1379	1-1403
HNGDX18	228	1145071	AL158846	1380	1-193 208-577 894-1167 1401-1629 1918-3320 4039-4082 9400-10337
HNGDX18	228	1145071	AL391069	1381	1-274
HNGDX18	228	1145071	AL158846	1382	1-117
HNGDY34	229	566863	AC069508	1383	1-998
HNGDY34	229	566863	AC017028	1384	1-998
HNGDY34	229	566863	AC022705	1385	1-998
HNGDY34	229	566863	AC069508	1386	1-314
HNGDY34	229	566863	AC017028	1387	1-314
HNGDY34	229	566863	AC022705	1388	1-314
HNGEA34	230	815678	AC068137	1389	1-1100
HNGJB41	233	852178	AC004542	1390	1-108 192-278 349-470 678-804 2945-4433 4687-4749 5583-5951 6304-6501 7398-7867 10583-10956 11008-11440 11603-11875 12070-12473
HNGJB41	233	852178	AC004542	1391	1-976
HNGKT41	234	836061	AC008581	1392	1-1099
HNGNK44	235	834949	AC011474	1393	1-1181
HNGNO53	236	836063	AC023387	1394	1-869
HNGNO53	236	836063	AL355500	1395	1-851
HNGPJ25	237	834942	AP002781	1396	1-1472

HNHCT47	238	634691	AC027793	1397	1-147
HNHCT47	238	634691	AC022107	1398	1-111
HNHCT47	238	634691	AP001271	1399	1-610
HNHCT47	238	634691	AP000487	1400	1-610
HNHCT47	238	634691	AP000405	1401	1-612
HNHCT47	238	634691	AP001271	1402	1-375
HNHCT47	238	634691	AP000487	1403	1-36 434-873
HNHCT47	238	634691	AP000405	1404	1-375
HNHGK22	240	597451	AC073193	1405	1-898
HNHGK22	240	597451	AC073193	1406	1-306
HNHBB10	241	634589	AC006275	1407	1-886
HNHBB10	241	634589	AC006275	1408	1-103
HNTMH79	244	801921	AL354986	1409	1-105 2142-2322 3037-3115 3592-3934 6365-6476 6825-6912 7486-11168
HNTMH79	244	801921	AL357500	1410	1-402 684-807 1045-1149 1642-1887 3186-3374 4081-4159 4636-4978 7409-7520 7869-7956 8530-12212
HNTMH79	244	801921	AC025145	1411	1-105 1122-4804
HNTMH79	244	801921	AL354986	1412	1-661
HNTMH79	244	801921	AL354986	1413	1-124
HNTMH79	244	801921	AL357500	1414	1-661
HNTMH79	244	801921	AL357500	1415	1-518
HNTMH79	244	801921	AC025145	1416	1-661
HODAG07	245	655356	AC004061	1417	1-875
HODAG07	245	655356	AC004061	1418	1-524
HODBB70	246	520196	AC006322	1419	1-561
HODBB70	246	520196	AC073110	1420	1-561
HODBB70	246	520196	AC025553	1421	1-561
HODBB70	246	520196	AC006322	1422	1-1741
HODBB70	246	520196	AC006322	1423	1-354
HODBB70	246	520196	AC073110	1424	1-1741
HODBB70	246	520196	AC073110	1425	1-354
HODBV05	247	825283	AC006344	1426	1-1102
HODCZ32	248	836069	AF064861	1427	1-124 381-660 1835-2487 2976-3577 3785-3919
HODCZ32	248	836069	AF129408	1428	1-124

					397-689 1835-2487 2976-3577 3785-3919
HODCZ32	248	836069	AF064861	1429	1-237
HODCZ32	248	836069	AF064861	1430	1-302
HODCZ32	248	836069	AF129408	1431	1-237
HODCZ32	248	836069	AF129408	1432	1-302
HORBS82	251	638293	AL034419	1433	1-1798
HORBS82	251	638293	AL034419	1434	1-1186
HOSEC25	253	688055	AL353685	1435	1-950
HOSEC25	253	688055	AL353685	1436	1-112
HOSEC25	253	688055	AL353685	1437	1-83 1024-4469
HOUCA21	256	655359	AP001915	1438	1-209
HOUCA21	256	655359	AC011168	1439	1-159
HOUCA21	256	655359	AC024518	1440	1-184
HOUCA21	256	655359	AC024490	1441	1-232
HOUCA21	256	655359	AC068588	1442	1-104
HOUCA21	256	655359	AC040977	1443	1-117
HOUCA21	256	655359	AC069267	1444	1-161
HOUCA21	256	655359	AC036207	1445	1-501 2219-2327 2469-3724 3843-3954 5309-5977 6011-6310 6648-6833
HOUCA21	256	655359	AC068588	1446	1-489
HOUCA21	256	655359	AC036207	1447	1-284
HOUCA21	256	655359	AC036207	1448	1-186
HOUDE92	257	580866	AC005865	1449	1-173 553-629 1941-2042 2757-2891 3294-3378 4606-5498 5550-8125
HOVBD85	261	827362	AC026132	1450	1-1111
HOVBD85	261	827362	AC026132	1451	1-315
HPCAL26	262	762822	AP000654	1452	1-4150
HPEBA84	263	753957	AL357372	1453	1-1238
HPEBA84	263	753957	AL161799	1454	1-1112
HPEBA84	263	753957	AL357372	1455	1-294
HPEBA84	263	753957	AL357372	1456	1-140
HPEBA84	263	753957	AL161799	1457	1-294
HPFCI36	265	855966	AL161652	1458	1-174 313-4710
HPJBU43	266	862058	AC009285	1459	1-336 1048-1292 2890-3083 3358-3823 3853-4133

					4626-5204
HPMBX22	267	702012	AP002360	1460	1-3049
HPMBX22	267	702012	AC015480	1461	1-1153
HPMBX22	267	702012	AC022183	1462	1-3048
HPMBX22	267	702012	AP002000	1463	1-3043
HPMCJ84	268	562779	AC006512	1464	1-658 3090-3543 4479-5105 5885-6846 7103-9707 9914-10293 11523-12034 12067-12181 13769-14031 14199-14291 14584-14790 15123-15154 17039-17482 17539-17987 18697-19052 19112-19380 20023-20268 21158-21598 21817-22221 23565-23665 23906-24076 24981-25506 25510-25861 25981-26645 26661-27449 27717-27812 27991-28024 28437-28888 29651-33442 33621-34089 34245-34808 34819-35284 35854-35960 38525-38771
HPMCJ84	268	562779	AC017104	1465	1-779
HPMCJ84	268	562779	AC006512	1466	1-315 439-531 707-1080 1144-1227 1491-1845 2113-2321 2700-3556 3818-4307 4336-4813 4958-5775
HPMCJ84	268	562779	AC006512	1467	1-738
HPMCJ84	268	562779	AC017104	1468	1-587
HPMCJ84	268	562779	AC017104	1469	1-753
HPMCV30	269	612870	AC006512	1470	1-658

					3090-3543 4479-5105 5885-6846 7103-9707 9914-10293 11523-12034 12067-12181 13769-14031 14199-14291 14584-14790 15123-15154 17039-17482 17539-17987 18697-19052 19112-19380 20023-20268 21158-21598 21817-22221 23565-23665 23906-24076 24981-25506 25510-25861 25981-26645 26661-27449 27717-27812 27991-28024 28437-28888 29651-33442 33621-34089 34245-34808 34819-35284 35854-35960 38525-38771
HPMCV30	269	612870	AC005517	1471	1-945
HPMCV30	269	612870	AC006512	1472	1-315 439-531 707-1080 1144-1227 1491-1845 2113-2321 2700-3556 3818-4307 4336-4813 4958-5775
HPMCV30	269	612870	AC006512	1473	1-738
HPMCV30	269	612870	AC005517	1474	1-352
HPMCV30	269	612870	AC005517	1475	1-177
HPMFH77	270	702014	AL357792	1476	1-78 1506-1910 2138-2352 3564-3655 3894-3990 4679-4802 6730-6826

					7263-7346 7463-7531 8845-8944 9220-9407 11682-11793 12453-13057 13114-13869 13880-14347 14370-17543 17664-20113
HPMFH77	270	702014	AC012043	1477	1-78 1506-1910 2138-2352 3564-3655 3894-3990 4679-4802 6730-6826 7263-7346 7463-7531 8845-8944 9220-9407 11682-11793 12453-13057 13114-13869 13880-14347 14370-17540 17661-20110
HPMFH77	270	702014	AL357792	1478	1-423
HPMFH77	270	702014	AL357792	1479	1-974
HPMFH77	270	702014	AC012043	1480	1-974
HPMFH77	270	702014	AC012043	1481	1-423
HPWBA29	273	561956	AL160011	1482	1-318
HPWBA29	273	561956	AL160011	1483	1-568 736-1212
HPWDK06	274	839825	AC009469	1484	1-4685
HRADA42	275	827302	AC011890	1485	1-943 1079-1636 2154-2473 3555-4008 4292-4439 6963-7154 8254-8537 8592-8985
HRADA42	275	827302	AC011890	1486	1-478
HRADF49	276	866481	AC068946	1487	1-142 359-1108 1191-1345 1445-2140 2314-2935 3040-3156 3395-4126 4311-4460 4749-5820
HRADF49	276	866481	AC060820	1488	1-142

					359-1109 1193-1348 1448-2142 2318-2944 3056-3166 3405-4136 4321-4472 4762-5836
HRADF49	276	866481	AC068946	1489	1-812 1124-1263 1281-2283 2470-2572 2752-2935 3851-3974 4153-4548 4602-4810 4980-5111 5262-5346 5434-5498 5609-5695 5871-5930 6448-6487
HRADF49	276	866481	AC060820	1490	1-686
HRDAI17	279	560720	AL139385	1491	1-99
HRDAI17	279	560720	AC008439	1492	1-125
HRDAI17	279	560720	AC034240	1493	1-141
HRDAI17	279	560720	AC015884	1494	1-207
HRDAI17	279	560720	AC008690	1495	1-164
HRDAI17	279	560720	AC022032	1496	1-146
HRDAI17	279	560720	AC027802	1497	1-117
HRDAI17	279	560720	AC060763	1498	1-129
HRDAI17	279	560720	AC073842	1499	1-165
HRDAI17	279	560720	AC023018	1500	1-145
HRDAI17	279	560720	AC021163	1501	1-97 402-2108 2292-2943 2997-3408 3423-3481 3551-4145 4557-5026 5029-6260 6276-6930 6936-7000
HRDAI17	279	560720	AC068013	1502	1-125
HRDAI17	279	560720	AC023398	1503	1-134
HRDAI17	279	560720	AC015884	1504	1-131
HRDDQ39	280	840405	AC009152	1505	1-755
HRDER22	281	688056	AC021153	1506	1-554
HRDER22	281	688056	AC021153	1507	1-205
HRDFK37	282	840381	AL360017	1508	1-1274
HRGBD54	283	828436	AC005035	1509	1-461 901-1370 3120-3210 3798-3995

					4091-4598 4951-5116 5461-6076 6372-6510 7952-8044 8598-8734 9056-9175 10553-10707 11338-12166 13462-15335 15383-15814 17772-17892 18209-18381 20452-20838 21115-21278 21599-22149 22202-23346 26511-26928 27540-27948 29312-29415 29610-30069 30613-31175 31214-31389 31904-32065 32911-33076 35162-38818 39310-39567
HRGBD54	283	828436	AC005035	1510	1-654
HRGBD54	283	828436	AC005035	1511	1-511
HSAVA08	284	580870	AC009030	1512	1-1052
HSAVA08	284	580870	AC009030	1513	1-431
HSAWZ40	286	634000	AC024249	1514	1-1532
HSAWZ40	286	634000	AC024249	1515	1-409
HSAWZ40	286	634000	AC024249	1516	1-319
HSHAX04	288	812178	AL049824	1517	1-110 1211-1257 1740-1878 3062-3144 3668-3772 4775-5175 5220-5345 7001-7384 8361-8657 8747-8937 9876-9980 12753-12901 13131-13891 14272-14726 14851-16619 16683-17910 18078-18367
HSHAX04	288	812178	AL354888	1518	1-47 1277-1376 2477-2523



					3006-3144 4326-4408 4932-5036 6039-6439 6484-6609 8265-8648 9625-9921 10011-10216 11141-11245 14019-14167 14397-15157 15538-15992 16117-17885 17949-19176 19344-19633
HSAX04	288	812178	AL354888	1519	1-314
HSAX04	288	812178	AL354888	1520	1-599
HSBF76	289	715838	AC009000	1521	1-479 1244-1408 1653-1763 1845-1991 2826-3064 3330-3422 3438-3788
HSBF76	289	715838	AC009000	1522	1-128
HSBF76	289	715838	AC009000	1523	1-36 1068-1329 1498-2123 3160-3211
HSKDR27	290	580874	AC008742	1524	1-50 1016-1321 1979-2220 2313-3310
HSKDR27	290	580874	AC008742	1525	1-495
HSLHG78	291	846148	AL157824	1526	1-33 5109-7241 7282-11311
HSLHG78	291	846148	AC012151	1527	1-68 2079-2213 2879-2965 3114-3257 4198-4337 6080-6204 8566-8644 13691-19866
HSLHX15	292	777861	AC072032	1528	1-364
HSLHX15	292	777861	AC002518	1529	1-247
HSLHX15	292	777861	AC022305	1530	1-686
HSLHX15	292	777861	AC078916	1531	1-364
HSLHX15	292	777861	AC072032	1532	1-288
HSLHX15	292	777861	AC078916	1533	1-288
HSNAP85	293	784054	AC007541	1534	1-94 2363-2658 3490-3979

					4019-7173
HSOAH16	295	827058	AC005046	1535	1-157 1370-1522 1727-1861 2415-2630 3229-3373 3584-3817 6852-7006 7432-7608 9282-9534 10097-10628 10841-11055 11740-11963 13041-13323 13451-13850 14382-15096 16075-16749 18154-18346 18531-18857 19624-20680 20738-21207 22021-22555 22673-23076 25746-25974 26932-27715 27740-30183 30458-30899 31160-32000 32177-32662 33181-33425 33436-33652 33857-34003 34289-34464 34518-34738 36446-37141 37163-38834 38961-39339
HSOAH16	295	827058	AC005046	1536	1-136
HSQBF66	296	560726	AC011878	1537	1-117 4124-5072 5221-5252
HSRBE06	298	871264	AP000330	1538	1-1628
HSRBE06	298	871264	AP000330	1539	1-526
HSRFD18	299	840771	AL096819	1540	1-3975
HSRFD18	299	840771	AL096819	1541	1-304
HSSEA64	301	853395	AC005865	1542	1-173 553-629 1941-2042 2757-2891 3294-3378 4606-5498 5550-8125
HSSEF77	302	658725	AC005041	1543	1-68 87-493

					711-838 997-1167 2227-2960 3326-4641 4768-5786
HSSEF77	302	658725	AC005041	1544	1-2920 3439-3667 3839-4332
HSSEF77	302	658725	AC005041	1545	1-143
HSSGJ58	304	747714	AL355491	1546	1-1936
HSSGJ58	304	747714	AL356112	1547	1-1936
HSSGJ58	304	747714	AL354665	1548	1-1932
HSYBI06	307	740766	AL049795	1549	1-135 2267-2358 2759-2859 3659-3775 4814-4946 5270-5730 6026-6474 6782-7341 7359-7475 7777-7939 8137-8247 8262-8548 8649-8729 9467-10551 10640-10701 11022-11356 11406-11450 11517-11645 12002-12057 12580-12713 14863-15041 15151-15479 16120-21982
HSYBI06	307	740766	AL049795	1550	1-98
HSYBI06	307	740766	AL049795	1551	1-110
HT3BF49	308	838620	AL355304	1552	1-2144
HT3BF49	308	838620	AL355307	1553	1-2144
HT3BF49	308	838620	AL355304	1554	1-517
HT3BF49	308	838620	AL355307	1555	1-517
HTEDF18	313	635528	AC018573	1556	1-55 956-1695
HTEDF18	313	635528	AL162613	1557	1-55 956-1695
HTEDF18	313	635528	AC018573	1558	1-114
HTEDF18	313	635528	AL162613	1559	1-114
HTEDF18	313	635528	AL162613	1560	1-115
HTEDJ28	314	762845	AC025974	1561	1-2357
HTEDJ28	314	762845	AC013370	1562	1-2357
HTEGS11	317	862066	AC018762	1563	1-2894
HTEHU59	318	840385	AP001003	1564	1-3207
HTEHU59	318	840385	AP001557	1565	1-3206
HTEHU59	318	840385	AP001156	1566	1-3207

HTEHU59	318	840385	AP001003	1567	1-863
HTEHU59	318	840385	AP001003	1568	1-1399 1504-1948 1956-2672 2761-2905 3007-3135 3290-3445 3537-3653 3746-3913 4010-4131 4251-4428
HTEHU59	318	840385	AP001557	1569	1-863
HTEHU59	318	840385	AP001557	1570	1-1395 1500-1944 1952-2667 2757-2900 3002-3130 3285-3439
HTEHU59	318	840385	AP001156	1571	1-1396 1502-1945 1953-2668
HTEHU59	318	840385	AP001156	1572	1-863
HTLAP64	322	603913	AC004556	1573	1-1668 2186-3003 3754-4253 4400-4483 5365-5868 8438-8508 8913-9031 9113-9151
HTLAP64	322	603913	AC051649	1574	1-1669 2187-3004 3755-4254 4401-4484 5367-5870 8558-8628 9033-9151 9233-9273
HTLBT80	323	840045	AL133227	1575	1-51 476-521 842-1226 1375-1490 3745-4016 4046-4229 4430-4855 5300-6053 6598-6883 7406-7446 7461-8437 8550-8681 8888-8919 8943-9353 9458-9544 9834-10607

					11550-11629 12196-12374 13532-14886
HTLBT80	323	840045	AL133227	1576	1-32 712-1071 3453-3870 4197-4326 4639-4751 5131-5202 5588-5638 7454-8108 8670-8767 9511-9692 9754-10134 11109-11226 12456-12607 15237-15316 18143-18311 18429-18478 20682-20982 20988-21295 22686-23061 23358-23495 24076-24612 25196-25334 26760-26926 27041-27152 27271-27379 27697-28289 29024-29340 29761-29840 31168-32681
HTLDA84	324	686397	AC013252	1577	1-193 1090-1263 2131-2278 2342-2772 3175-3278 3880-4063 5308-5664 6255-6390 6546-6710 8111-8419 8911-9048 9056-9151 9349-9871 10386-10510 10884-11035 11336-11428 12106-12228 13268-14698
HTLDA84	324	686397	AC013252	1578	1-355
HTLDU78	326	637702	AC011444	1579	1-1305
HTLDU78	326	637702	AC011444	1580	1-285
HTLDU78	326	637702	AC011444	1581	1-274

HTLEC82	327	811992	AC019337	1582	1-1139 1384-1619 3675-3800 5094-5426 5777-6057 6169-8159
HTLEC82	327	811992	AC025769	1583	1-1141 1386-1621 3679-3804 5102-5434 5785-6065 6177-8168 8171-9355 9390-9624 9657-10390 11962-12241 12874-13031 13270-13327
HTLEC82	327	811992	AC008537	1584	1-1141 1385-1620 3677-3802 5098-5430 5781-6061 6173-8165
HTLEC82	327	811992	AC019337	1585	1-1182
HTLEC82	327	811992	AC008537	1586	1-1186
HTLEV48	329	723799	AL079300	1587	1-833 1783-2055 2908-3362 3583-4048
HTLEV48	329	723799	AL079300	1588	1-163
HTNAM63	331	566880	AL160261	1589	1-498 786-1786
HTNAM63	331	566880	AL160261	1590	1-141
HTOAI50	333	638623	AC040933	1591	1-1413
HTOAI50	333	638623	AC025531	1592	1-1411
HTOAI50	333	638623	AC040933	1593	1-498
HTOAI50	333	638623	AC025531	1594	1-498
HTOAM11	334	664508	AC002369	1595	1-586 2559-2651 3329-3426 3756-5088
HTOAM11	334	664508	AP001486	1596	1-1191
HTOAM11	334	664508	AP000875	1597	1-1192
HTOAM11	334	664508	AC002369	1598	1-228
HTOAM11	334	664508	AP001486	1599	1-711
HTOAM11	334	664508	AP001486	1600	1-374
HTOAM11	334	664508	AP000875	1601	1-710
HTODH57	335	823126	AL136531	1602	1-1646
HTODH57	335	823126	AL136531	1603	1-510
HTODH83	336	580884	AC012046	1604	1-1972
HTODH83	336	580884	AC012046	1605	1-105
HTOGR38	339	824639	AL359923	1606	1-949
HTOGR38	339	824639	AL359923	1607	1-311

					1036-1359
HTOGR38	339	824639	AL359923	1608	1-294
HTSFJ32	342	637720	AC015734	1609	1-80 562-915 925-4400
HTSFJ32	342	637720	AC015734	1610	1-463
HTSFJ32	342	637720	AC015734	1611	1-359
HTTEE41	344	840950	AC018921	1612	1-92 318-578 837-912 1091-1249 1321-1387 1862-2192 2485-2579 2708-2831 3685-4257 4547-5127 5811-6037 6562-7076 7541-7678 8069-8191 10100-10207 11102-11688 11721-11847 12201-12335 12532-12641 12888-12991 13027-13546 13637-16146
HTTEE41	344	840950	AC018921	1613	1-100
HTXDB22	346	853407	AL031775	1614	1-701 1446-1660 2327-5963 5998-6343 6348-9247 9973-10269 11408-11597
HTXDB22	346	853407	AL133264	1615	1-590 628-1412 3625-3805 5513-5637 6165-6792 7435-7538 7644-8370 8448-8734 8778-8979 9234-10123 10477-11177 11922-12136 12803-16439 16474-16819 16824-19723 20445-20744 21884-22073

HTXDB22	346	853407	AL031775	1616	1-202 457-1346
HTXDC38	347	801935	AC040160	1617	1-122 511-831 1253-1314 1392-1780 1873-2177
HTXDC38	347	801935	AC008594	1618	1-122 511-831 1253-1314 1392-1780 1873-2177
HTXDC38	347	801935	AC040160	1619	1-1122 1212-2163 2234-2809 2849-3163 4270-5496 5517-6166 7170-7347 7580-7727 7852-7997 8090-8180 8268-8382 8648-8742 8815-8925
HTXDC38	347	801935	AC008594	1620	1-1122 1212-2163 2234-2809 2851-3145 4270-5497 5518-6167 7169-7346 7579-7726 7851-7996 8089-8179 8267-8381 8647-8741 8814-8924
HTXDC77	348	844258	AC004182	1621	1-2744 2917-3357
HTXDC77	348	844258	AC018433	1622	1-2744 2917-3357
HTXDD61	349	853408	AC024267	1623	1-1098
HTXDD61	349	853408	AC024267	1624	1-255
HTXET11	351	581521	AC011802	1625	1-984
HTXET11	351	581521	AC025414	1626	1-984
HTXET11	351	581521	AC011802	1627	1-36 836-964 4059-5438 6005-6176 6789-7120 7124-7588 7735-7827 7925-8770



					9057-9545
HTXET11	351	581521	AC025414	1628	1-36 836-964 4059-5438 6002-6173 6786-7117 7121-7585 7732-7809
HTXJD85	352	840391	AC078797	1629	1-1239
HTXJD85	352	840391	AC078797	1630	1-2296 2428-2719
HTXJD85	352	840391	AC078797	1631	1-224
HTXJY08	353	637774	AC005962	1632	1-2075
HTXJY08	353	637774	AC004757	1633	1-2075
HTXJY08	353	637774	AC005962	1634	1-478
HTXJY08	353	637774	AC005962	1635	1-1011
HTXJY08	353	637774	AC004757	1636	1-478
HTXJY08	353	637774	AC004757	1637	1-1011
HUFCL31	355	801938	AC012255	1638	1-417 834-1753 1788-1918 2176-2628 2755-2971 3036-5033
HUFCL31	355	801938	AC012255	1639	1-134
HUSCJ14	358	894699	AC007040	1640	1-149 394-889 1061-1139 2097-2249 2852-3007 5021-5089 5217-5919 6119-8896
HUSCJ14	358	894699	AC007040	1641	1-854
HUSCJ14	358	894699	AC007040	1642	1-397
HUSGU40	360	684975	AC072032	1643	1-364
HUSGU40	360	684975	AC022305	1644	1-686
HUSGU40	360	684975	AC078916	1645	1-364
HUSGU40	360	684975	AC072032	1646	1-288
HUSGU40	360	684975	AC078916	1647	1-288
HUSIR18	361	762858	AC068055	1648	1-149
HUSIR18	361	762858	AC022231	1649	1-151
HUSIR18	361	762858	AC010694	1650	1-202
HUSIR18	361	762858	AL160163	1651	1-258 1798-4171
HUSIR18	361	762858	AC027300	1652	1-158
HUSIR18	361	762858	AC073047	1653	1-170
HUSIR18	361	762858	AC009524	1654	1-151
HUSIR18	361	762858	AC068055	1655	1-77
HUSIR18	361	762858	AC010694	1656	1-77
HUSIR18	361	762858	AL160163	1657	1-117
HWBBQ70	364	689121	AL031120	1658	1-1940
HWBBQ70	364	689121	AL137003	1659	1-292

HWBBQ70	364	689121	AL031120	1660	1-689
HWBBQ70	364	689121	AL031120	1661	1-102
HWBBQ70	364	689121	AL137003	1662	1-689
HWBCN36	366	722259	AL031296	1663	1-670 1590-2584 3609-3751 4204-4803 4847-5271 9874-10146 11847-12328 12493-13051 13395-13635 15455-15917 17288-17739 18945-19908 21414-22006 27737-27823 35955-36575 36643-37204 37341-37504 39154-39312 41736-42263 47221-47669 47712-48167 50898-51095 51163-51655 51716-52580 52706-58181
HWBCN36	366	722259	AL109757	1664	1-670 1590-2583 3578-3751 4203-4802
HWBCN36	366	722259	AL031296	1665	1-274
HWBCN36	366	722259	AL109757	1666	1-425
HWBDJ08	367	762860	AL133351	1667	1-238 2679-2860 6204-6544 6911-7399 7795-7909 8430-8914 9187-9620 9744-10234 11159-11190 11310-11737 12408-16037
HWBDJ08	367	762860	AC013339	1668	1-238 2699-2880 6224-6564 6931-7419 7815-7929 8449-8932 9205-9638 9762-10130 10144-10309

					11380-11807 12478-16107
HWBDJ08	367	762860	AL133351	1669	1-466
HWBDJ08	367	762860	AC013339	1670	1-466
HWDAG96	369	796743	AL121753	1671	1-77 91-640 2531-2639 3380-3625 3692-4433 4677-4862 5043-5355 5532-5893 6299-10579 12966-13230 14676-15242 15749-15996 16066-16393 16675-17238 17381-17885 18029-18260 19347-19477 20064-20199 20849-21010
HWDAG96	369	796743	AL356652	1672	1-77 91-640 2531-2639 3380-3625 3692-4433 4677-4862 5043-5355 5532-5893 6299-10590 12979-13243 14689-15255 15762-16052 16079-16406 16688-17251 17394-17898 18042-18273 19363-19509 20088-20188 20863-21024
HWDAG96	369	796743	AL121753	1673	1-437
HWDAG96	369	796743	AL121753	1674	1-638 793-854
HWDAG96	369	796743	AL356652	1675	1-437
HWDAG96	369	796743	AL356652	1676	1-638 793-854
HWD AJ01	370	794016	AC015551	1677	1-670
HWD AJ01	370	794016	AC019214	1678	1-670
HWHPB78	371	740778	AL157945	1679	1-300 364-790 1344-1519 1584-1709

					2403-2580 4780-4968 5485-5559 5960-6128 6243-6955 7258-7317 9073-9145 9404-9544 10342-10513 10746-11354 12004-12578 12863-13087 13224-13382 13993-14047 14319-14444 14753-14878 15465-15713 16007-16123 17413-17740 17817-18127 18231-18634 18771-18881 19945-20231 21024-21169 23112-23363 23692-24413
HWHPB78	371	740778	AC026283	1680	1-292 353-776 1340-1506 1568-1696 2408-2534 4767-4955 5472-5546 5957-6293 6373-7085 7386-7445 9201-9273 9532-9672 10470-10641 10873-11481 12131-12705 12990-13214 13351-13509 14119-14173 14445-14570 14879-15004 15604-15844 16133-16253 17540-17867 17944-18254 18356-18755 18892-19002 20066-20352 21146-21308 23235-23486

					23813-24533
HWHPB78	371	740778	AL157945	1681	1-490
HWHPB78	371	740778	AC026283	1682	1-318
HWLBO67	372	834315	AC011739	1683	1-517
HWLBO67	372	834315	AC011739	1684	1-586 3120-3867 4726-4866 6044-6395 6686-7156 11614-12016 18205-18501
HWLBO67	372	834315	AC011739	1685	1-202
HE2CA60	375	888705	AC005921	1686	1-74 276-1076 1472-2160 3055-3389 3769-3898 4143-4288 4322-4697 4699-4772 6745-6851 7692-9044 9581-9743 13540-17646 1-74 276-1076 1472-2160 3055-3389 3769-3898 4143-4288 4322-4697 4699-4772 6745-6851 7692-9044 9581-9743 13540-17646
HE2CA60	375	888705	AC005921	1687	1-1466 1-1466
HLWAU42	377	695737	AC010794	1688	1-3291 1-3291
HLWAU42	377	695737	AC009985	1689	1-3291 1-3291
HLWAU42	377	695737	AC010794	1690	1-92 1-92
HLWAU42	377	695737	AC010794	1691	1-279 1-279 736-997 736-997 1377-1619 1377-1619 3065-3511 3065-3511 3829-7852 3829-7852

HLWAU42	377	695737	AC009985	1692	1-279 736-997 1320-1633 3065-3511 3829-7851 1-279 736-997 1320-1633 3065-3511 3829-7851
HEQBJ01	380	876546	AC009079	1693	1-198 1263-1467 2271-2369 5035-5870 5888-6174 6249-6472 7148-11343 1-198 1263-1467 2271-2369 5035-5870 5888-6174 6249-6472 7148-11343
HEQBJ01	380	876546	AC009079	1694	1-173 916-970 1-173 916-970
HTOJL95	381	762851	AC011859	1695	1-2853 1-2853
HTOJL95	381	762851	AC026347	1696	1-2853 1-2853
HTOJL95	381	762851	AC011859	1697	1-421 1-421
HTOJL95	381	762851	AC011859	1698	1-340 1-340
HTOJL95	381	762851	AC026347	1699	1-340 1-340
HTOJL95	381	762851	AC026347	1700	1-421 1-421
HTLIF12	382	901225	AC011953	1701	1-126
HTEEF26	383	879704	AC006329	1702	1-118 1-118 290-360 290-360 635-771 635-771 1248-1417 1248-1417 2755-2831 2755-2831 3548-3667 3548-3667 4852-4986

					4852-4986 5016-5119 5016-5119 5247-5774 5247-5774 6507-8421 6507-8421
HTEEF26	383	879704	AC006329	1703	1-367 1-367
HTEED26	384	762846	AF214634	1704	1-2149 1-2149
HTEED26	384	762846	AC025931	1705	1-2153 1-2153
HE8FC45	388	845672	AC007000	1706	1-2261 2328-3085 3093-6210 6306-6555 6630-8724 9378-10405 10433-10732 10766-11172 11591-11805 12605-13216
HE8FC45	388	845672	AC006014	1707	1-1533 2260-2403 2894-3811 5391-5478 5645-5945 7052-7659 7903-8408 8681-9613 10033-11894 13474-17953 17961-21161 21163-21418 21506-23629 23876-25000 25330-25629 25806-26108 26527-26741 27724-27832 27877-28134 28505-29118 29179-29698 30220-30471 30918-31476 33359-33446 33613-33723 34757-35010 35021-35442 37343-39068
HE8FC45	388	845672	AC005488	1708	1-1525 2823-3802 5381-5467

					5634-5934 7010-7619 7948-8368 8868-11864 11870-12107 12594-12811 12884-13191 13225-13414 13437-14521 14529-17110 17190-17916 17924-21107 21551-23569 23842-24790 25294-25593 25666-26072 27692-27800 27845-28102 28538-29666 30322-30463 30913-31471 33356-33443 33610-33910 34799-35052 35063-35484 36553-37367 38056-39110
HE8FC45	388	845672	AC005098	1709	1-1716 2360-2501 2897-3814 5395-5482 5649-5949 6624-7332 7837-8257 8530-11755 11758-12386 12495-12713 12792-13099 13250-13315 13337-17835 17902-18103 18336-22003 22097-24218
HE8FC45	388	845672	AC005071	1710	1-960 1108-3199 3473-4418
HE8FC45	388	845672	AC004878	1711	1-980 2557-2644 2811-3111 4255-4862 5191-5611 5884-9106 9112-9349 9832-10053 10126-10433



					10467-10656 10679-11417 11461-15048 15173-18370 18955-20842 21089-22211 23017-23232 25096-25345 25716-26329 26453-26909 28140-28698 30582-30669 30836-31136 32001-32686 34133-34567 35036-37131 37137-37181 38806-42375 42420-43181 43189-43972 44198-45300
HE8FC45	388	845672	AC005073	1712	1-1255 1403-3494 3768-4713
HE8FC45	388	845672	AC007003	1713	1-539 783-1288 1410-5415 5538-5768 5818-6125 6276-6341 6363-10846 10854-14320 14396-16493 16760-17881 18212-18511 18545-18951 19370-19584 20384-20991
HE8FC45	388	845672	AC061712	1714	1-1876 1884-5086 5088-5343 5431-7528 7801-8923
HE8FC45	388	845672	AC006995	1715	1-2045 2679-3414 3744-4043 4116-4522 6295-6552 6988-8052 8656-8914 15068-15731 19863-22252 27896-28385 28583-29993

					30266-30724
HE8FC45	388	845672	AC007000	1716	1-1192 1740-1980 2324-3297 4882-4969 5136-5436 6223-6476 6487-7106 7435-7855 7977-12142 12173-12247
HE8FC45	388	845672	AC006014	1717	1-979
HE8FC45	388	845672	AC006014	1718	1-929 1161-4487 4579-5506 5664-5765 5979-9483 10048-10856 11336-11702 12041-12251 12253-12463 13816-13903 13917-14426
HE8FC45	388	845672	AC005488	1719	1-867 1144-2852 2949-4487 4579-5789 5978-9485 10048-10911 11334-11700 12034-12509 13205-13321 13907-14417
HE8FC45	388	845672	AC005488	1720	1-735 738-975
HE8FC45	388	845672	AC005098	1721	1-866 1143-2850 2949-4489 4581-5793 5905-8184 8255-9460 10026-10834 11078-11157 11307-11672 12131-12486 13183-13299 13912-14426
HE8FC45	388	845672	AC005098	1722	1-937
HE8FC45	388	845672	AC005071	1723	1-300
HE8FC45	388	845672	AC005071	1724	1-319
HE8FC45	388	845672	AC004878	1725	1-255
HE8FC45	388	845672	AC004878	1726	1-741 818-1073 1163-3038

HE8FC45	388	845672	AC005073	1727	1-257
HE8FC45	388	845672	AC005073	1728	1-300
HE8FC45	388	845672	AC007003	1729	1-614
HE8FC45	388	845672	AC061712	1730	1-300
HE8FC45	388	845672	AC061712	1731	1-2326 2349-2538 2572-2879 2952-3169 3656-3893 3896-7121 7394-7814 8143-8752 10017-10119
HE8FC45	388	845672	AC006995	1732	1-256

**Table 1D:** The polynucleotides or polypeptides, or agonists or antagonists of the present invention can be used in assays to test for one or more biological activities. If these polynucleotides and polypeptides do exhibit activity in a particular assay, it is likely that these molecules may be involved in the diseases associated with the biological activity. Thus, the polynucleotides or polypeptides, or agonists or antagonists could be used to treat the associated disease.

The present invention encompasses methods of detecting, preventing, diagnosing, prognosticating, treating, and/or ameliorating a disease or disorder. In preferred embodiments, the present invention encompasses a method of treating an immune disease or disorder comprising administering to a patient in which such detection, treatment, prevention, and/or amelioration is desired a protein, nucleic acid, or antibody of the invention (or fragment or variant thereof) in an amount effective to detect, prevent, diagnose, prognosticate, treat, and/or ameliorate the immune disease or disorder.

In another embodiment, the present invention also encompasses methods of detecting, preventing, diagnosing, prognosticating, treating, and/or ameliorating an immune disease or disorder; comprising administering to a patient combinations of the proteins, nucleic acids, or antibodies of the invention (or fragments or variants thereof), sharing similar indications as shown in the corresponding rows in Column 3 of Table 1D.

Table 1D provides information related to biological activities for polynucleotides and polypeptides of the invention (including antibodies, agonists, and/or antagonists thereof). Table 1D also provides information related to assays which may be used to test polynucleotides and polypeptides of the invention (including antibodies, agonists, and/or antagonists thereof) for the corresponding biological activities. The first column ("Gene No.") provides the gene number in the application for each clone identifier. The second column ("cDNA Clone ID:") provides the unique clone identifier for each clone as previously described and indicated in Table 1A through

Table 1D. The third column ("AA SEQ ID NO:Y") indicates the Sequence Listing SEQ ID Number for polypeptide sequences encoded by the corresponding cDNA clones (also as indicated in Tables 1A, Table 1B, and Table 2). The fourth column ("Biological Activity") indicates a biological activity corresponding to the indicated polypeptides (or polynucleotides encoding said polypeptides). The fifth column ("Exemplary Activity Assay") further describes the corresponding biological activity and also provides information pertaining to the various types of assays which may be performed to test, demonstrate, or quantify the corresponding biological activity.

Table 1D describes the use of, inter alia, FMAT technology for testing or demonstrating various biological activities. Fluorometric microvolume assay technology (FMAT) is a fluorescence-based system which provides a means to perform nonradioactive cell- and bead-based assays to detect activation of cell signal transduction pathways. This technology was designed specifically for ligand binding and immunological assays. Using this technology, fluorescent cells or beads at the bottom of the well are detected as localized areas of concentrated fluorescence using a data processing system. Unbound fluorophore comprising the background signal is ignored, allowing for a wide variety of homogeneous assays. FMAT technology may be used for peptide ligand binding assays, immunofluorescence, apoptosis, cytotoxicity, and bead-based immunocapture assays. *See*, Miraglia S et. al., "Homogeneous cell and bead based assays for highthroughput screening using fluorometric microvolume assay technology," *Journal of Biomolecular Screening*; 4:193-204 (1999). In particular, FMAT technology may be used to test, confirm, and/or identify the ability of polypeptides (including polypeptide fragments and variants) to activate signal transduction pathways. For example, FMAT technology may be used to test, confirm, and/or identify the ability of polypeptides to upregulate production of immunomodulatory proteins (such as, for example, interleukins, GM-CSF, Rantes, and Tumor Necrosis factors, as well as other cellular regulators (e.g. insulin)).

Table 1D also describes the use of kinase assays for testing, demonstrating, or quantifying biological activity. In this regard, the phosphorylation and de-phosphorylation of specific amino acid residues (e.g. Tyrosine, Serine, Threonine) on cell-signal transduction proteins provides a fast, reversible means for activation and de-activation of cellular signal transduction pathways. Moreover, cell signal transduction via phosphorylation/de-phosphorylation is crucial to the regulation of a wide variety of cellular processes (e.g. proliferation, differentiation, migration, apoptosis, etc.). Accordingly, kinase assays provide a powerful tool useful for testing, confirming, and/or identifying polypeptides (including polypeptide fragments and variants) that mediate cell signal transduction events via protein phosphorylation. *See e.g.*, Forrer, P., Tamaskovic R., and Jaussi, R. "Enzyme-Linked Immunosorbent Assay for Measurement of JNK, ERK, and p38 Kinase Activities" *Biol. Chem.* 379(8-9): 1101-1110 (1998).

Table 1D

Gene No.	cDNA Clone ID	AA SEQ ID NO: Y	Biological Activity	Exemplary Activity Assay	Preferred Indication
1	H6BSF56	415	Activation of transcription through serum response element in immune cells (such as T-cells).	Assays for the activation of transcription through the Serum Response Element (SRE) are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate the serum response factors and modulate the expression of genes involved in growth. Exemplary assays for transcription through the SRE that may be used or routinely modified to test SRE activity of the polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include assays disclosed in Berger et al., Gene 66:1-10 (1998); Cullen and Malm, Methods in Enzymol 216:362-368 (1992); Henthorn et al., Proc Natl Acad Sci USA 85:6342-6346 (1988); and Black et al., Virus Genes 12(2):105-117 (1997), the content of each	A preferred embodiment of the invention includes a method for inhibiting (e.g., reducing) TNF alpha production. An alternative preferred embodiment of the invention includes a method for stimulating (e.g., increasing) TNF alpha production. Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"), Highly preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosus, Crohn's disease, multiple sclerosis and/or as described below), immunodeficiencies (e.g., as described below), boosting a T cell-mediated immune response, and suppressing a T cell-mediated immune response. Additional highly preferred indications include inflammation and

				<p>of which are herein incorporated by reference in its entirety. T cells that may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary mouse T cells that may be used according to these assays include the CTLL cell line, which is an IL-2 dependent suspension culture of T cells with cytotoxic activity.</p>	<p>inflammatory disorders, and treating joint damage in patients with rheumatoid arthritis. An additional highly preferred indication is sepsis. Highly preferred indications include neoplastic diseases (e.g., leukemia, lymphoma, and/or as described below under "Hyperproliferative Disorders"). Additionally, highly preferred indications include neoplasms and cancers, such as, for example, leukemia, lymphoma, melanoma, glioma (e.g., malignant glioma), solid tumors, and prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver and urinary cancer. Other preferred indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia. Preferred indications include anemia, pancytopenia, leukopenia, thrombocytopenia, Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkitt's lymphoma, arthritis, AIDS,</p>
--	--	--	--	--	--

					<p>granulomatous disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, cardiac reperfusion injury, and asthma and allergy. An additional preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").</p>
2	H6EEC72	416	<p>Production of RANTES in endothelial cells (such as human umbilical vein endothelial cells (HUEVC))</p>	<p>RANTES FMAT. Assays for immunomodulatory proteins that induce chemotaxis of T cells, monocytes, and eosinophils are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to mediate immunomodulation, induce chemotaxis, and/or mediate humoral or cell-mediated immunity. Exemplary assays that test for immunomodulatory proteins evaluate the production</p>	

					<p>of cytokines, such as RANTES, and the induction of chemotactic responses in immune cells. Such assays that may be used or routinely modified to test immunomodulatory activity of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include the assays disclosed in Miraglia et al., J Biomolecular Screening 4:193-204 (1999); Rowland et al., "Lymphocytes: a practical approach" Chapter 6:138-160 (2000); Cocchi et al., Science 270(5243):1811-1815 (1995); and Robinson et al., Clin Exp Immunol 101(3):398-407 (1995), the contents of each of which are herein incorporated by reference in its entirety. Endothelial cells that may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary endothelial cells that may be used according to these assays include human umbilical vein endothelial cells (HUVEC), which are endothelial cells which line venous blood vessels, and are involved in functions</p>	
--	--	--	--	--	--	--



				that include, but are not limited to, angiogenesis, vascular permeability, vascular tone, and immune cell extravasation.	
2	H6EEC72	416	Activation of transcription through serum response element in immune cells (such as natural killer cells).	Assays for the activation of transcription through the Serum Response Element (SRE) are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate serum response factors and modulate the expression of genes involved in growth and upregulate the function of growth-related genes in many cell types. Exemplary assays for transcription through the SRE that may be used or routinely modified to test SRE activity of the polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include assays disclosed in Berger et al., Gene 66:1-10 (1998); Cullen and Malm, Methods in Enzymol 216:362-368 (1992); Henthorn et al., Proc Natl Acad Sci USA	A preferred embodiment of the invention includes a method for inhibiting (e.g., reducing) TNF alpha production. An alternative highly preferred embodiment of the invention includes a method for stimulating (e.g., increasing) TNF alpha production. Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"), Highly preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosus, Crohn's disease, multiple sclerosis and/or as described below), immunodeficiencies (e.g., as described below), boosting a T cell-mediated immune response, and suppressing a T cell-mediated immune response. Additional highly preferred indications

				<p>85:6342-6346 (1988); Benson et al., J Immunol 153(9):3862-3873 (1994); and Black et al., Virus Genes 12(2):105-117 (1997), the content of each of which are herein incorporated by reference in its entirety. T cells that may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary T cells that may be used according to these assays include the NK-YT cell line, which is a human natural killer cell line with cytolytic and cytotoxic activity.</p>	<p>include inflammation and inflammatory disorders, and treating joint damage in patients with rheumatoid arthritis. An additional highly preferred indication is sepsis. Highly preferred indications include neoplastic diseases (e.g., leukemia, lymphoma, and/or as described below under "Hyperproliferative Disorders"). Additionally, highly preferred indications include neoplasms and cancers, such as, for example, leukemia, lymphoma, melanoma, glioma (e.g., malignant glioma), solid tumors, and prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver and urinary cancer. Other preferred indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia. Preferred indications include anemia, pancytopenia, leukopenia, thrombocytopenia, Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkitt's</p>
--	--	--	--	---	--

					<p>lymphoma, arthritis, AIDS, granulomatous disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, cardiac reperfusion injury, and asthma and allergy. An additional preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").</p>
3	HACAB68	417	<p>Activation of transcription through cAMP response element in immune cells (such as T-cells).</p>	<p>Assays for the activation of transcription through the cAMP response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to increase cAMP and regulate CREB transcription factors, and modulate expression of genes involved in a wide variety of cell functions. Exemplary assays for transcription through the cAMP</p>	<p>Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"), and infection (e.g., an infectious disease as described below under "Infectious Disease"). Preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosus, multiple sclerosis and/or as described below), immunodeficiencies (e.g., as described below),</p>

				<p>response element that may be used or routinely modified to test cAMP-response element activity of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include assays disclosed in Berger et al., Gene 66:1-10 (1998); Cullen and Malm, Methods in Enzymol 216:362-368 (1992); Henthorn et al., Proc Natl Acad Sci USA 85:6342-6346 (1988); Black et al., Virus Genes 15(2):105-117 (1997); and Belkowsky et al., J Immunol 161(2):659-665 (1998), the contents of each of which are herein incorporated by reference in its entirety. T cells that may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary mouse T cells that may be used according to these assays include the CTLL cell line, which is a suspension culture of IL-2 dependent cytotoxic T cells.</p>	<p>boosting a T cell-mediated immune response, and suppressing a T cell-mediated immune response. Additional preferred indications include inflammation and inflammatory disorders. Highly preferred indications include neoplastic diseases (e.g., leukemia, lymphoma, and/or as described below under "Hyperproliferative Disorders"). Highly preferred indications include neoplasms and cancers, such as, for example, leukemia, lymphoma (e.g., T cell lymphoma, Burkitt's lymphoma, non-Hodgkins lymphoma, Hodgkin's disease), melanoma, and prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver and urinary cancer. Other preferred indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia. Preferred indications include anemia, pancytopenia, leukopenia, thrombocytopenia, acute lymphocytic anemia (ALL), plasmacytomas, multiple</p>
--	--	--	--	--	---

					<p>myeloma, arthritis, AIDS, granulomatous disease, inflammatory bowel disease, sepsis, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, and asthma and allergy.</p>
3	HACAB68	417	<p>Activation of transcription through serum response element in immune cells (such as T-cells).</p>	<p>Assays for the activation of transcription through the Serum Response Element (SRE) are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate the serum response factors and modulate the expression of genes involved in growth. Exemplary assays for transcription through the SRE that may be used or routinely modified to test SRE activity of the polypeptides of the invention (including antibodies and agonists or antagonists of the invention)</p>	<p>A preferred embodiment of the invention includes a method for inhibiting (e.g., reducing) TNF alpha production. An alternative preferred embodiment of the invention includes a method for stimulating (e.g., increasing) TNF alpha production. Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"), Highly preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosus, Crohn's disease, multiple</p>

			<p>include assays disclosed in Berger et al., Gene 66:1-10 (1998); Cullen and Malm, Methods in Enzymol 216:362-368 (1992); Henthorn et al., Proc Natl Acad Sci USA 85:6342-6346 (1988); and Black et al., Virus Genes 12(2):105-117 (1997), the content of each of which are herein incorporated by reference in its entirety. T cells that may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary mouse T cells that may be used according to these assays include the CTLL cell line, which is an IL-2 dependent suspension culture of T cells with cytotoxic activity.</p>	<p>sclerosis and/or as described below), immunodeficiencies (e.g., as described below), boosting a T cell-mediated immune response, and suppressing a T cell-mediated immune response. Additional highly preferred indications include inflammation and inflammatory disorders, and treating joint damage in patients with rheumatoid arthritis. An additional highly preferred indication is sepsis. Highly preferred indications include neoplastic diseases (e.g., leukemia, lymphoma, and/or as described below under "Hyperproliferative Disorders"). Additionally, highly preferred indications include neoplasms and cancers, such as, for example, leukemia, lymphoma, melanoma, glioma (e.g., malignant glioma), solid tumors, and prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver and urinary cancer. Other preferred indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example,</p>
--	--	--	---	---

					hyperplasia, metaplasia, and/or dysplasia. Preferred indications include anemia, pancytopenia, leukopenia, thrombocytopenia, Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkitt's lymphoma, arthritis, AIDS, granulomatous disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, cardiac reperfusion injury, and asthma and allergy. An additional preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").
3	HACAB68	417	Activation of Endothelial Cell p38 or JNK Signaling Pathway.	Kinase assay. JNK and p38 kinase assays for signal transduction that regulate cell proliferation, activation, or apoptosis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention	A highly preferred embodiment of the invention includes a method for stimulating endothelial cell growth. An alternative highly preferred embodiment of the invention includes a method for inhibiting endothelial cell

				<p>(including antibodies and agonists or antagonists of the invention) to promote or inhibit cell proliferation, activation, and apoptosis. Exemplary assays for JNK and p38 kinase activity that may be used or routinely modified to test JNK and p38 kinase-induced activity of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include the assays disclosed in Forrer et al., Biol Chem 379(8-9):1101-1110 (1998); Gupta et al., Exp Cell Res 247(2): 495-504 (1999); Kyriakis JM, Biochem Soc Symp 64:29-48 (1999); Chang and Karin, Nature 410(6824):37-40 (2001); and Cobb MH, Prog Biophys Mol Biol 71(3-4):479-500 (1999); the contents of each of which are herein incorporated by reference in its entirety. Endothelial cells that may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary endothelial cells that may be used according to these assays include human umbilical vein</p>	<p>growth. A highly preferred embodiment of the invention includes a method for stimulating endothelial cell proliferation. An alternative highly preferred embodiment of the invention includes a method for inhibiting endothelial cell proliferation. A highly preferred embodiment of the invention includes a method for stimulating apoptosis of endothelial cells. An alternative highly preferred embodiment of the invention includes a method for inhibiting (e.g., decreasing) apoptosis of endothelial cells. A highly preferred embodiment of the invention includes a method for stimulating (e.g., increasing) endothelial cell activation. An alternative highly preferred embodiment of the invention includes a method for inhibiting (e.g., decreasing) the activation of and/or inactivating endothelial cells. A highly preferred embodiment of the invention includes a method for stimulating angiogenesis. An alternative highly preferred embodiment of the invention includes a method for inhibiting</p>
--	--	--	--	---	---



				<p>endothelial cells (HUVEC), which are endothelial cells which line venous blood vessels, and are involved in functions that include, but are not limited to, angiogenesis, vascular permeability, vascular tone, and immune cell extravasation.</p>	<p>angiogenesis. A highly preferred embodiment of the invention includes a method for reducing cardiac hypertrophy. An alternative highly preferred embodiment of the invention includes a method for inducing cardiac hypertrophy. Highly preferred indications include neoplastic diseases (e.g., as described below under “Hyperproliferative Disorders”), and disorders of the cardiovascular system (e.g., heart disease, congestive heart failure, hypertension, aortic stenosis, cardiomyopathy, valvular regurgitation, left ventricular dysfunction, atherosclerosis and atherosclerotic vascular disease, diabetic nephropathy, intracardiac shunt, cardiac hypertrophy, myocardial infarction, chronic hemodynamic overload, and/or as described below under “Cardiovascular Disorders”). Highly preferred indications include cardiovascular, endothelial and/or angiogenic disorders (e.g., systemic disorders that affect vessels such</p>
--	--	--	--	---	--

					<p>as diabetes mellitus, as well as diseases of the vessels themselves, such as of the arteries, capillaries, veins and/or lymphatics). Highly preferred are indications that stimulate angiogenesis and/or cardiovascularization. Highly preferred are indications that inhibit angiogenesis and/or cardiovascularization.</p> <p>Highly preferred indications include antiangiogenic activity to treat solid tumors, leukemias, and Kaposi's sarcoma, and retinal disorders. Highly preferred indications include neoplasms and cancer, such as, Kaposi's sarcoma, hemangioma (capillary and cavernous), glomus tumors, telangiectasia, bacillary angiomatosis, hemangioendothelioma, angiosarcoma, haemangiopericytoma, lymphangioma, lymphangiosarcoma. Highly preferred indications also include cancers such as, prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver, and urinary cancer. Preferred indications include</p>
--	--	--	--	--	--

					<p>benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia. Highly preferred indications also include arterial disease, such as, atherosclerosis, hypertension, coronary artery disease, inflammatory vasculitides, Reynaud's disease and Reynaud's phenomenon, aneurysms, restenosis; venous and lymphatic disorders such as thrombophlebitis, lymphangitis, and lymphedema; and other vascular disorders such as peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atherosclerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred indications include stroke, graft rejection, diabetic or other</p>
--	--	--	--	--	---

				<p>retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions. Additional highly preferred indications include fibromas, heart disease, cardiac arrest, heart valve disease, and vascular disease. Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"). Preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosus, multiple sclerosis and/or as described below) and immunodeficiencies (e.g., as described below). Additional preferred indications include inflammation and inflammatory disorders (such as acute and chronic inflammatory diseases, e.g., inflammatory bowel disease and Crohn's disease), and pain management.</p>
--	--	--	--	---

3	HACAB68	417	<p>Activation of Skeletal Muscle Cell PI3 Kinase Signalling Pathway</p>	<p>Kinase assay. Kinase assays, for example an GSK-3 kinase assay, for PI3 kinase signal transduction that regulate glucose metabolism and cell survival are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to promote or inhibit glucose metabolism and cell survival. Exemplary assays for PI3 kinase activity that may be used or routinely modified to test PI3 kinase-induced activity of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include assays disclosed in Forrer et al., Biol Chem 379(8-9):1101-1110 (1998); Nikoulina et al., Diabetes 49(2):263-271 (2000); and Schreyer et al., Diabetes 48(8):1662-1666 (1999), the contents of each of which are herein incorporated by reference in its entirety. Rat myoblast cells that may be used according to these assays are publicly available (e.g., through the</p>	<p>A highly preferred embodiment of the invention includes a method for increasing muscle cell survival. An alternative highly preferred embodiment of the invention includes a method for decreasing muscle cell survival. A preferred embodiment of the invention includes a method for stimulating muscle cell proliferation. In a specific embodiment, skeletal muscle cell proliferation is stimulated. An alternative highly preferred embodiment of the invention includes a method for inhibiting muscle cell proliferation. In a specific embodiment, skeletal muscle cell proliferation is inhibited. A preferred embodiment of the invention includes a method for stimulating muscle cell differentiation. In a specific embodiment, skeletal muscle cell differentiation is stimulated. An alternative highly preferred embodiment of the invention includes a method for inhibiting muscle cell differentiation. In a specific embodiment, skeletal muscle cell differentiation is</p>
---	---------	-----	---	---	--

				<p>ATCC). Exemplary rat myoblast cells that may be used according to these assays include L6 cells. L6 is an adherent rat myoblast cell line, isolated from primary cultures of rat thigh muscle, that fuses to form multinucleated myotubes and striated fibers after culture in differentiation media.</p>	<p>inhibited. Highly preferred indications include disorders of the musculoskeletal system. Preferred indications include neoplastic diseases (e.g., as described below under "Hyperproliferative Disorders"), endocrine disorders (e.g., as described below under "Endocrine Disorders"), neural disorders (e.g., as described below under "Neural Activity and Neurological Diseases"), blood disorders (e.g., as described below under "Immune Activity", "Cardiovascular Disorders", and/or "Blood-Related Disorders"), immune disorders (e.g., as described below under "Immune Activity"), and infection (e.g., as described below under "Infectious Disease"). A highly preferred indication is diabetes mellitus. An additional highly preferred indication is a complication associated with diabetes (e.g., diabetic retinopathy, diabetic nephropathy, kidney disease (e.g., renal failure, nephropathy and/or other diseases and disorders as described in the</p>
--	--	--	--	--	--

						<p>"Renal Disorders" section below), diabetic neuropathy, nerve disease and nerve damage (e.g. due to diabetic neuropathy), blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemic-hyperosmolar coma, cardiovascular disease (e.g., heart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders" section below), dyslipidemia, endocrine disorders (as described in the "Endocrine Disorders" section below), neuropathy, vision impairment (e.g., diabetic retinopathy and blindness), ulcers and impaired wound healing, infections (e.g., infectious diseases and disorders as described in the "Infectious Diseases" section below, especially of the urinary tract and skin), carpal tunnel syndrome and Dupuytren's</p>
--	--	--	--	--	--	--

					<p>contracture). An additional highly preferred indication is obesity and/or complications associated with obesity.</p> <p>Additional highly preferred indications include weight loss or alternatively, weight gain.</p> <p>Additional highly preferred indications are complications associated with insulin resistance.</p> <p>Additional highly preferred indications are disorders of the musculoskeletal system including myopathies, muscular dystrophy, and/or as described herein.</p> <p>Additional highly preferred indications include: myopathy, atrophy, congestive heart failure, cachexia, myxomas, fibromas, congenital cardiovascular abnormalities, heart disease, cardiac arrest, heart valve disease, and vascular disease.</p> <p>Highly preferred indications include neoplasms and cancer, such as, rhabdomyoma, rhabdosarcoma, stomach, esophageal, prostate, and urinary cancer. Preferred indications also include breast, lung, colon, pancreatic, brain, and liver cancer. Other</p>
--	--	--	--	--	---